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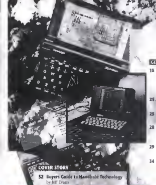

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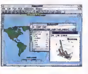
Maps and Data

At Comdex Las Vegas this past November, I saw half a dozen Geographic Information System (GIS) packages priced under US$100 and designed for small business and salespeople. These programs usually ship on a CD-ROM, work with existing database programs and allow users to connect their own sales or distribution information to maps and demographic data.



Why would I use a GIS system?

This type of program might be useful to a salesperson who sells across, as an example, all of Eastern Canada. With it, she could plot the geographic locations of her best customers. She might then add a list of potential customers and be able to plan her trips more effectively, by seeing a batch of customers at once. Another potential user might be a pizza store owner who wants to expand his business. He has found his pizzas to be especially popular where people of a certain ethnic origin dominate. By combining a street map file with Statistics Canada data, he might be able to spot another area where this ethnic group lives to locate his new restaurant.

What is wrong with this picture?

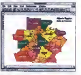
Well, the only problem with my two scenarios above is that they are not likely to happen in Canada within the $100 price range. Why? Because Stats Canada, unlike its US counterpart, does not place its maps and data into the public domain (which allows these companies to sell it for under $100). Instead the Crown retains copyright and licenses the information to a few companies who charge big bucks to get copies of the data. Individuals and small businesspeople are unlikely to be able to afford the rates Stats Canada and its resellers charge for this data. The starting price for a major city such as Toronto, Montreal or Vancouver is $2,500, and a data set that includes all major Canadian cities costs $15,000. These prices are enough to make most small business owners say, "well maybe next year."

User Pay?

While in most cases I am for the deficit reduction, user-pay approach to government, I wonder in this case, if we are not being penny-wise and pound foolish. If this type of software were made available to Canadian companies, better decisions would be made by businesspeople, greater productivity and efficiency would occur, and all of Canada would benefit from our becoming competitive on a world scale. Every business that goes bankrupt because of bad or insufficient information costs us all in increased bank rates, UIC payments for the employees that spill out of the company, and lost tax revenue. If Stats Canada keeps the price of the data high, the information is available for the wealthy large corporations only. To get a little deeper into this question, I called both Stats Canada and Compusearch, one of Stats Canada's main resellers.

Why are the maps so expensive?

According to Jan Kestle, president of Compusearch (416-348-9195), it pays 70 times what its sister company in the US pays for the same type of maps and data. Kestle believes that the maps and data Compusearch sells are at the best prices in Canada. According to Kestle, in her business there are no standard orders. In a strange reverse of logic, receiving less costs the buyer more, because more work goes into creating the custom solution. Compusearch produces data sets for a variety of GIS packages, including Atlas Argus, Tactician, MapInfo and ArcInfo. Compusearch does offer an interesting combination of the data from Stats Canada with sociographic data from other sources. It can provide sophisticated site selection information which most companies would benefit from and which would probably pay back numerous times in better revenues from the choice of location.



Who sets the pricing?

The pricing of the data to end-users seems to be left largely up to the company that purchases it from Stats Canada. Stats Canada does charge big bucks for the data to start with. I was quoted $85,000 for the Digital Street Network data set. According to the people at Stats Canada, resellers can pay up to five times as much in order to have the privilege of reselling.

Buy High, Sell Low

From my conversations with Stats Canada and Compusearch, it seems that risk-avoidance is all that stands between Canadians and a $100 CD ROM of maps and data. Most business people will tell you about the relationship between volume and price. If the perceived market potential is in the hundreds, the pricing model should reflect that price and the prices we are seeing are appropriate. The emerging US market seems to suggest that the market for GIS data could be much greater if it were priced lower. Selling data at $100 a pop seems to indicate a market in the hundreds of thousands, possi- ➤

bly millions in the US. The rule of thumb for Canada, based on its population, suggest that it would perhaps be one tenth the size — still a sizable market.

Companies such as Compusearch have made their livelihood by charging a small number of companies a large amount of money for the data. Switching to a consumer model that sells $100 programs to thousands of low-end users is obviously a big risk for the company. The barrier seems to be the high price it has to pay to get the data in the first place.

How much does Stats Canada really recover by selling data this way?

Looking more closely at the question of cost recovery I discovered that it may not be as impressive as it sounds. I spoke with Jerry Stinson, associate director of Stats Canada, in charge of licensing services. In the US and other countries around the world, Stats Canada is apparently being touted as a model of how a government department can fund its own work.

Three-to-four percent recovered

According to Stinson, StatsCan has a budget in the ball park of $250-300 million. Of this it recovers about $30 million through things like custom tabulations processing and analysis, publications and reselling the data through companies like Compusearch, MapInfo and Tetrad (604-685-2295) which reach specialty and local markets with their data. Stinson estimated that about $10 million is coming from the computer based demographic and map area — still significant but less than four percent of StatsCan's overall budget.

Solution One: Stop the shell game

I see three solutions to getting less expensive programs to market. The first would require Stats Canada to give up on the illusion of cost recovery. My argument is that it is slowing down the innovation and productivity of businesses in Canada just so that politically Stats Canada can claim to be "recovering costs." If the numbers I have been cited are correct the money recovered is a very small portion of its total budget. It should be noted that businesses in Canada do pay a substantial portion of taxes already which inhale up to 70 percent of their profits.

Solution Two: Some companies take a big risk

The other solution is for some company or companies to gamble and put the data out in a consumer format at a low cost. I can see why this has been slow to happen because of the up-front cost, but judging from the boom in the US market I would wager that whoever does it would be well rewarded.

Solution Three: Stats Canada takes the risk

Most radical of all is the notion that Stats Canada drop its cozy relationship with these high-end resellers and create a division that sells direct at a lower price in an effort to market the data to a broader spectrum of users. This route might actually result in a cost recovery program that doesn't just pay lip service to the concept.

I believe Solution One is more likely to see an inexpensive product get into end users' hands more quickly. I would argue that Stats Canada's full data set should be put on the Internet in the public domain for the use of Canadian companies. Any Canadian company should be able to resell the data. If we could swing it under one of our cultural umbrellas of the Free Trade deal, I would add to it that these software companies should have to be 51 percent Canadian owned, so all the cash doesn't head South right away. In this case I buy the argument that "Information wants to be Free."

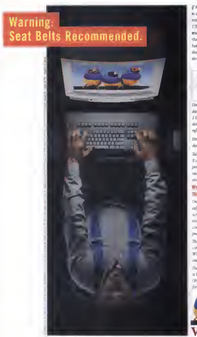
Enjoy the issue.

Douglas Alder
Publisher/Editor

* ProCD (800-99-CD-ROM) maker of the best-selling Canada Phone CD, has SelectStreet; Spatial Systems (415-365 9242) has WizMap. Delorme (800-452-5931) sells Street Atlas USA; and even ESRI (909 793 2853), who makes high end GIS systems, has a sub-$100 program called BusinessMap Lite. I also saw Maps and Data from Macon USA (617-254-2295).

Useful Web sites on this topic:
www.delorme.com
www.procd.com
www.esri.com

Anyone with Internet access who is interested in playing around with what a GIS system is and can do should check out Energy Mines and Resources Web Site on the Internet.
http://www-nais.ccm.emr.ca/



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A Multi for the Mac?

Excellent article on multifunction devices (TCP Oct 1995) Please clarify one point the buyer's guide and article didn't mention which printer could be hooked up to a Macintosh or a PC. Does this mean all units can be used on either Mac or PC or is it assumed that they are for PCs only unless Mac is specifically mentioned?

James E Kulbach, via Internet

Gil Replies *You should check for — and ask the manufacturer about — specific Mac functionality When I reviewed the HP OfficeJet I tested it on a PC and a Mac and noted that not all functions were available on Mac but the most important ones were (printing faxing and copying) I'd say that virtually all the MF devices out there will require a parallel-to-serial converter for Mac (at least $100), and will thus be much slower to print from a Mac Certain products like the newer HP products require bi-directional parallel communications for some of their features and won't work AT ALL from a Mac as there are currently no bi-directional parallel adapters for Macintosh Fax broadcast and/or fax management software, and/or scanning functions and software are also sometimes bundled with multifunction peripherals but are not usually supported on Mac Sorry — I'm a Mac user too (at least part of the time) so I know what it's like*

Warp en Francais

Here's a small suggestion for OS/2 Warp users who have the BonusPak but perhaps aren't using it very much I installed the BonusPak under OS/2 but it wasn't being used as much as our MS Works One evening we had a French school project and I wanted a French spell checker So I reinstalled the French version rather than English variation of the BonusPak and now we enjoy a complete French package With many children in French immersion and being a bilingual country this may be useful to others

The French spell checker (Orthographe) points out when I miss accents and corrects them perfectly It is also much more effective than looking up every third word in our Dictionnaire Larousse Further there is a primary secondary and a personal dictionary setting My primary is set to French the secondary to US English The following sentence was accepted completely Maintenant c'est the time pour toutes the young to apprendre French

It correctly identified all the errors French and English in Noq c est le temos for toutes the jeunes to apeendre French" and made appropriate suggestions for all errors, "Now" instead of Noq, "temps instead of temos etc

If you do not wish to permit English words to be accepted, it is very easy to turn off the secondary dictionary under Document Orthographe, Options

The manual identifies 15 country codes including Germany Italy, Spain also should those be your particular requirement.

Bill Galloway, via CompuServe

We're Covered

It was a pleasant surprise to see the rendering from Peter Jaworek's award-winning animation on the cover of December's *The Computer Paper* His production was a delightful entry in the BC Student Film and Video Festival and we look forward to seeing more of his work in the future

I would like to make a minor correction to the tag line in "About the Cover" The specific award won was "Best Independent Production" the distinction being there are other Best Production awards in each of our student levels as well

Earl R Thurston technical director, BC Student Film and Video Festival

More on the Pentium EIDE Controller Flaw

When the commander in-chief puts out a call to-arms, loyal TCP readers must respond It's our duty!

The first letter in December's Letters section ended with a petition from Doug Alder, publisher/editor to all readers of *The Computer Paper* to let TCP know if they had heard about, or were interested in hearing about, information published in the November issue regarding problems that may be encountered by purchases of computers manufactured in early 1995 The original article received a rebuttal from a Mr Joe C Smith of LabTop Computers Inc. Burnaby BC

First, let me say that as a subscriber to TCP for over three years, I'd like to thank LabTop for the advertising support they've given this magazine Each month I've enjoyed their ads and always considered this company to be a leader in the Lower Mainland The fact that LabTop Computers employs many people in this area, is a further testament to the value they and Mr Smith add to our local economy Mr Smith's rebuttal of TCP's article, proves he is dedicated to keeping his company on the leading edge in the competitive computer market

*Continued on page **36***

Out of the box and... ON TO THE NET IN MINUTES.

With a Supra 28,800 bps Plug and Play™ modem, Laura LaMarsh was on the net in 3 1/2 minutes.*

What does a teacher from Hillsboro, Oregon know that you don't? Quite honestly, when it comes to installing a modem from Supra, there's not much to know Because Supra's new Plug and Play faxmodems virtually install themselves Which means no more jumper hassles, device conflicts, or time consuming diagnostics Whether you're running Windows 3 1 or Windows 95—the net can finally be yours in minutes! In fact, here's what PC World had to say about Supra's easy installation [illegible]

While we welcome reviews like these our primary goal is to impress real people like you People like Laura LaMarsh who are interested in using online resources to get ahead To advance their careers And to stay on top of today's rapidly changing communications We make modems for PC users who want sophisticated communications without the usual set up and configuration hassles.

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MOLSON'S "I AM" ON THE WEB

Once the Internet was a haven for non-commercial communications. These days it seems like every business is getting onto the World Wide Web. While it's easy to get a "Net Presence" there's no guarantee that you are going to be popular. That's no problem for Molson Breweries whose recent foray onto the Internet has become one of the most popular Canadian sites on the Web.

After only three months of existence Molson's "I Am Online" Web site at http://www.molson.com/Canadian/ has registered over 1.5 million hits which is very heavy traffic for a relatively new Web site.

The site does not just try to sell beer — the site was designed to focus on subjects of interest to Canadians. Sports fans are lured to Molson's Hockey Net and information about many Canadian bands are featured in Molson's Sound Box area where people can sometimes chat online with Canadian musical celebrities.

It was recently named "Cool Corporate Site of the Week" by popular Net judge Glenn Davis and is featured in a case study of the use of the Web as a corporate and public relations tool in the latest edition of The Canadian Internet Handbook. — K.S-R.

Contact. Molson Breweries "I Am Online" http://www.molson.com/Canadian/

SOFTWARE HELP FOR SNAIL-MAIL

While e-mail is rapidly becoming a popular way for individuals to exchange letters there are still many things you cannot ship through the Internet. Group 1 Software has released the Canadian Resource CD-ROM created to ensure that people and businesses alike are able to send mail quickly and efficiently through the Canadian postal system.

The Canadian Resource CD-ROM comprises three separate programs designed to help users get mail to their intended recipients. Designed for beginners to the Canadian postal system The Canadian Postal Primer provides an overview of the basic rules and concepts of mail delivery and Canada Post Corp. and provides examples of how to properly format mail to ensure delivery in Canada. SmartLookup is an electronic version of the Canadian Postal Code directory containing over 11.6 million addresses and 670,00 postal codes. Users can look up a single address or browse through street names, house numbers and cities in this database. The CD-ROM also includes a demo of the Master Delivery Series software designed to correct and validate Canadian addresses quickly and easily for individual or mass mailings.

The Canadian Resource CD-ROM has a suggested list price of $119, but for a limited time it is available merely for a shipping and handling charge of $9.95. The Canadian Resource CD-ROM requires about 30MB of free disk space and a Windows compatible computer. — K.S-R.

Contact. Group 1 Software 1-800-368-4886

YOUR WORKPLACE IN 2005

The office nine years from now will be "highly flexible, portable and modular — a virtual workspace defined by state-of-the-art computer telecommunications, wireless and environmental management technology."

At least that's what professional facilities managers think. The above is one of the observations noted in the 1995 Canadian Facilities Monitor, a survey of facility management professionals. Of the 225 survey respondents, more than 80 percent work in organizations with more than 100 employees, primarily in major cities.

The survey was designed to find out what Canadian workers can expect their future workplace to look and feel like. Overall, IFMA members said the office of 2005 will be more user friendly, more secure, healthier and "greener."

Workstations and voice mail will be virtually omnipresent and most employees will access online service networks the way they now make telephone calls. The 2005 office will also be more secure, and on-site fitness centres and day care facilities will be more prevalent.

➤

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Most respondents in the survey expected their organizations would be smoke free and that employees would enjoy natural lighting and ergonomic furniture

The survey was conducted in July 1995 by the International Facility Management Association The association is based in Houston and has about 1 300 members in 10 chapters in Canada — DT

Contact: IFMA 713 623-4362

DEC'S SAFE INTERNET TUNNELS

Digital Equipment of Canada Ltd has introduced two products that enable businesses to use the Internet as a cost-effective alternative and extension to private networks Digital Internet Group Tunnel and the Digital Internet Personal Tunnel software enable remote PCs and servers to connect to private networks via the Internet Digital claims that by using the Tunnels companies can replace their leased communications lines with bandwidth supplied by Internet Service Providers reducing network management and operation costs

Tunnelling enables information to be transmitted from one computer to another over a public network as if the two were connected by a single secure wire. The Tunnels incorporate sophisticated authentication and encryption technologies After authenticating the tunnel client and the tunnelserver, information is encrypted and sent across the Internet as unrecognizable information Once the information reaches its final destination it is reconstituted and decrypted into a readable form

The Digital Internet Personal Tunnel enables users to securely connect any remote PC running Windows 95 into their companies private network while the Digital Internet Group Tunnel connects two or more private networks to support business-to-business communications

The Digital Internet Group Tunnel runs as a layered product on a UNIX system with at least 32 Mb of RAM a CD ROM drive and a network connection The Digital Internet Personal Tunnel runs under Windows 95 and requires at least a 486 processor and 8 MB of RAM — RC

For additional information send e-mail to tunnel@digital.com or visit Digital at http://www.digital.com/info/internet on the Web

INTERNET BASED TELEPHONE DIRECTORY SERVICE AVAILABLE

Have you ever wanted to try to find the phone number or address for somebody in the US but didn t want rack up large directory assistance charges? PC411 Inc may have the solution with their release of PC411 for Windows 1 1 which provides access to full directory information including telephone numbers addresses and Zip codes for more than 95 million homes and businesses in the United States

An on line service the user can purchase or download the PC411 connectivity software and access the PC411 directory via modem The service is priced according to usage and is designed to be cheaper than or on par with the cost of traditional directory assistance through the telephone company The user pays for the service when a match is found even if a search includes multiple cities area codes and states Most searches cost US$0 50 apiece with a $15 credit included with the retail price of the product Users can search for people in PC411 by name address or telephone number and can download hundreds of listing to their computer at a time for later access

PC411 for Windows 1 1 requires a Windows 3.1 compatible computer and a modem The full retail product can be purchased for $24 95 U S or it can be downloaded from PC411 s World Wide Web site at http://www.[illegible] — KSR

Contact PC411 Inc 1-800 2 GET-411 or (310) 645-1114
World Wide Web http://www.pc411.com/

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Claris Emailer will run on any Macintosh with a 68020 or greater microprocessor using System 7 0 or later It requires a minimum of 1 5 MB of RAM 3 MB of disk space and the user must already have an existing e-mail account with an online service Claris Emailer has a suggested retail price of $129 — K.S-R.

Contact Claris Canada 1-800-361-6075 or 416-841 9611

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Heartbeat Accelerating

Comdex Reflects Industry's Pace Of Change

BY JEFF EVANS

If [illegible] the North American [illegible] in a hurry go to the [illegible] Comdex in Las Vegas. If you want to get a sense of how fast computing is changing, then go to Fall Comdex in Las Vegas every year for a few years. Comdex is a snapshot of the state of the computer industry and if you look at it year over year it gets to be a bit like a time lapse film of a flower blooming — changes that are imperceptible when seen day by day are marvelous when you compare one year to the next.

This year there were no really revolutionary changes at the November Comdex, yet the cumulative scale of change in computing from the previous year was enormous. The snapshot of computing at this year's Comdex could best be described as faster, cheaper, more powerful, more interactive.

Hard as it is to believe, the pace of change in personal computing is accelerating. There has been a multitude of fairly large incremental changes in almost every product and service category in 1995. This means we can expect a very different overall computing environment by the end of 1996 compared to 1995.

IBM, and Digital are poised to offer secure systems to handle transactions over the internet, but they 'just aren't quite ready.'

The Major Themes: Connectivity, Windows and Interactivity

This year's Comdex kicked off with a keynote speech on the first day from Lou Gerstner, the CEO of IBM. Gerstner presented a vision of a networked world in the 21st century, where IBM will play a central role in providing the backbone that links all the diverse new technologies together.

On the second day, Bill Gates offered his own take on the wired future. Interacting with recorded video characters acting out a drama on the social and ecological uses of technology, Gates continued with his long running vision of information at our finger tips, a PC on every desk or in every pocket, with an emphasis on the socially responsible use of technology that was much more overt than in the past.

The Exhibits

Over 2,200 exhibitors packed the various Comdex sites, and hundreds of conference rooms and hospitality suites supplemented the formal presentations on the trade show floor.

The most impressive exhibitor was Microsoft with a huge corporate booth and a partners pavilion. Microsoft's focus was Windows 95 and third party Windows 95 software. But it was Windows NT that won a "Best of Comdex" award.

Apple seemed to have bounced back from the negative publicity of a few months ago regarding exploding PowerBooks and billion dollar backlogs of orders, announcing that Apple was the number one vendor in US computer market share in the third quarter of 1995. Hot new Mac technologies included an extremely fast PCI 3D accelerator card (up to 12 times 3D graphics performance improvement), the public unveiling of Newton 2.0 software (which won a "Best of Comdex" award), OpenDoc for Mac OS, and the Apple

Continued on page **14**

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Comdex

Continued from page **12**

Internet Connection Kit and Apple Internet Server Solution

Also at the show IBM announced delivery schedules for OpenDoc for OS/2 and emphasised their networking solutions for a PC-centric world In an interview with *TCP*, an IBM representative pointed out that there has been a return to IBM's networking technology by major clients who need absolute reliability and security for mission critical and secure electronic commerce applications.

Online Commerce, Almost

IBM and Digital are poised to offer secure systems to handle transactions over the Internet, but they "just aren t quite ready If as expected such systems roll out onto the market in early 1996 then there could be a flood of new businesses and services starting up quickly

Following the theme of connectivity and communications, Symantec won a *Byte* Magazine "Best of Comdex award for the PCAnywhere 95 the Win 95 version of its remote access software Delrina's CommSuite 95 was a runner up

Digital cameras from Chinon and Epson, for under $500 US are aimed at the consumer market for the first time A more expensive ($800 US) Casio digital camera feature a color preview screen to let users see the pictures they've taken without having to first download them to a PC

TCP interviewed Jan Diery, the new head of AST in the US only eight days after he took over the company In a wide ranging interview Diery outlined his plans for getting AST's US operation back on track by speeding up the product-to-market cycle and marketing the brand more effectively Diery formerly with Apple had high praise for AST Canada, which has sustained rapid and steady growth describing it as an operation that the US parent could learn a lot from

Multimedia Wave Rolls On

Several hundred mostly small-to-medium sized companies were grouped in the Sands Exhibition Centre including dozens of multimedia software digital video and virtual reality vendors The Interplay game software booth featured the Forte VR game helmet a remarkably good 3D head tracking system that made for very realistic flying and driving simulations. Caligari, the publisher of the TrueSpace 3D animation program for the PC, showed its VRML (virtual reality modeling language) software, which allows users to surf the Internet in 3D when connecting to VRML compatible sites.

Canadian software publisher Aztech featured its line of photo CDs, Sirius software had a very impressive 50s theme booth showing its entertainment CD ROM bundles and Toronto's Delrina was exhibiting its Communications Suite I talked to Delrina rep Josef Zankelwicz and he mentioned that the finalization of Symantec's acquisition of Delrina was expected in a few days

Broderbund Software was showing off some lovely new children's software and in general there seemed to be more children's and edutainment software in evidence than last year.

Philips, the Dutch company that invented the CD and CD-ROM formats, announced that a new high-density CD-ROM technology has been adopted by the major makers of CD technology including Sony The new much higher-capacity CD-ROM readers and disks will begin to reach the market by the middle of 1996, and will allow PC users to run high-resolution digital video versions of feature films on their computers.

Creative Labs showed its 3D Blaster graphics accelerator, and Miro demonstrated its miroVIDEO DC20 video capture and editing system. It was very impressive on a high end Windows PC, creating high quality digital video in real time.

One of the most visually impressive product displays was a veritable mountain of Snappy video digitizers made by the California-based company, Play. According to Play's Canadian-born sales manager Stephan Bouchard, Play is shipping thousands of Snappy digitizers per week. "And we have some major new graphics products coming in 1995," he claimed.

As seems to be its habit, Ottawa's Corel Corp. had a major presence in Las Vegas but not as an official part of Comdex. The company put on an extravaganza at the Flamingo Hotel where it outlined the company's current product line and direction, with special attention to their new videoconferencing product.

The Ghost In The Machine: The Return Of The Amiga?

To my amazement, as I was about to head back to the main entrance of the Sands I saw the word "Amiga." My head snapped around and I stared at a nest of Amiga A4000 towers running video and animation demos Escom, the German company that bought the Amiga technology had taken a booth at the last minute I talked to the PR manager for the Amiga Technology division, and he spoke of Escom's plans to sell 500 000 A1200s and 80,000 A4000s, mostly in Europe, in 1996 ❑

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Am486DX2-66, Intel™	$2610	$2708	$2898	$3194
Am486DX4 100, Intel™	$2664	$2764	$2955	$3218
PVT Lite Notebooks (4 mb, 10" mono LCD, w/o battery doubling)				
Hard Drive	340 mb	520 mb	810 mb	1.3 gb
PVT L a486DX2-66	$1586	$1686	$1856	$2121
PVT L a486DX4 100	$1624	$1724	$1914	$2178

Notebook Features	PVT-Lite	AM-LITE	PENTIUM PVT/M
CPU Type & Landmark Speed	SX-33 118 MHz DX2-66 266 MHz DX4-100 398 MHz	DX2 66 221 MHz DX4 100 330 MHz	P 75 804 MHz P 90 >400 MHz P 100 420 MHz
Unique CPU Upgradability	SX-33 to DX4/100	SX-33 to DX4/100	DX 75 to DX-100
Base/Max RAM	4/20 mb	4/20 mb	8/40 mb
Local Bus Video RAM	512k	1 mb	1 mb
Max. HDD Capacity	1.3 GB	1.3 GB	1.3 GB
Internal Floppy	1.44 hi density	1.44 removable	1.44 hi density
Screen Size	10"	11.3"	10.5"
Max. External Resolution	1024 x 768 16 colours	1024 x 768 256 colours	1024 x 768 256 colours
Int. Screen Resolution	640 x 480	640 x 480	640 x 480
Ext. SVGA Monitor	Simultaneous	Simultaneous	Simultaneous
1 serial, parallel, ext. video 2 PCMCIA slots	High speed parallel high speed serial	high speed parallel high speed serial	Yes
Battery Type	NiMH	NiMH	NiMH
Built-in Pointing Device	integrated trackpoint	integrated trackpoint	25 mm trackball
Docking Station	No	Yes	Yes
Removable HDD	detachable	standard	standard
VESA Local Bus HDD	Yes	Yes	Yes
sound/speaker/mike	16-bit built in	16-bit built-in	16 bit built in
Dimensions (inches)	11.3 x 8.4 x 1.66	11.7 x 8.8 x 1.69	11.3 x 10 x 2.4
Weight (incl. battery)	5.2 lbs	5.8 lbs	6.2 lbs
Battery Life 2-4 hours	Yes	up to 8 hours with 2nd battery pack	Yes
SVGA, PCMCIA Drivers	Included	Included	Included
Carry Case AC adapter	Included	Included	Included

PERFORMANCE BENCHMARKS
Generic Pentium TRITON motherboard, 256k writeback (dummy) cache 157
Ultinet, Pentium TRITON motherboard, 256k reg async industry standard 188
Ultinet Pentium TRITON chipset motherboard, 256k sync pipeline burst cache = 223

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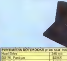

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DX 100, Pentium	$4079	$4178	$4388	$4633
DX 120 Pentium	$4262	$4362	$4552	$4817
DX 133 Pentium	$4544	$4731	$4834	$5099

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UPGRADE:	
Each mb of 70 ns fast RAM	$80
PVT-Lite mono to dual scan colour LCD	$386
Notebook with Pentium dual scan LCD to active matrix LCD	$415
Pentimedia to Pentimedia DLX 2 mb video RAM & trackpad	$286
ADD ON:	
MS-DOS 6.22 full OEM package disks and manuals	$89
Windows 3.1 / Win 3.11 with Wrgp (OEM)	$69/89
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Extra Removable HDD case/external hard drive	$80/Call
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External Parallel Tape Back up	$430
HARD DRIVE UPGRADES	
340 mb/510 mb	$375/515
810 mb/1.3 gb	$725/1036

ULTINET MIDTOWER SYSTEM SPECIFICATIONS	With 486 CPU	W/Pentium processor
CPU Options	DX/2-66 DX/4 100	DX 60/75 DX 90/100/120/133
Motherboard BIOS Chipset Cache	3 VESA, 7 ISA slots AMI BIOS UMC/SIS 128K exp to 256k, 20ns	4 PCI 3 ISA slots Award BIOS, Triton 256K exp to 512k, 15ns
Hard Disk Drive HDD Controller Transfer mode	<12 ms VLB 1256 Mb/s transfer enhanced IDE M2	<12 ms PCI dual channel on mbd enhanced IDE M4
Floppy Drive	1.44 mb hi-density	1.44 mb hi-density
Low rad/energy mtr Video Card	14 or 15" .28dp SVGA 1mb 32-bit SVGA VLB	14 or 15" .28dp SVGA 1mb 32-bit SVGA PCI
Enhanced keyboard	101 key spillproof	101 key spillproof
Mouse	3 button, 400dpi	3 button, 400dpi
Case Power supply	enh. digital midtower 230 watt	enh. digital midtower 230 watt
Serial, Parallel Ports	2 serial, 1 parallel	2 serial, 1 parallel
Multimedia Options MPEG Video	2x or 4x CD full screen w/ATI M64	2x or 4x CD full screen w/ATI M64
Warranty	2 years system P & L 5 years motherboard	2 years system P & L 5 years motherboard

from The Computer Paper Dec 1995

The two machines (Pentium 75 and 100) from Ultinet leave the competition dead in the water. Both place very high in their respective categories on price & performance irrespective of the fact that the price includes a 15 inch .28dpi UVGA (1280x1024) monitor

BENCHMARK TEST CONDITIONS

Tests were done using PC Magazine Winbench 95 tests with Windows 3.1 and 100 MHz Pentium CPUs installed. The same video card/hard drive & memory were used for the comparison. The regular 256k async cache motherboard was 25% faster than the one with writeback or dummy cache. Dummy cache was 2% faster compared to a board with no cache. Many suppliers use motherboards with write-back (dummy) cache. Always ask for motherboards with asynchronous or synchronous cache

COMPUTER PAPER
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BENCHMARK TESTS

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The Computer Paper
December, 1995

MIDTOWER PACKAGES

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P-75 Pentium ® processor	$1898	$75/mth
P 90 Pentium ® processor	$1980	$79/mth
P-100 Pentium ® processor	$2043	$82/mth
P 120 Pentium ® processor	$2177	$87/mth
P-133, Pentium ® processor	$2384	$95/mth
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P 75 Pentium ® processor	$2278	$91/mth
P 90 Pentium ® processor	$2328	$93/mth
P-100, Pentium ® processor	$2391	$98/mth
P-120 Pentium ® processor	$2587	$103/mth
P-133, Pentium ® processor	$2821	$113/mth
Upgrade ATI Mach 64 1 mb DRAM to 2 mb DRAM		$50
Reg async to sync pipeline burst cache 13% boost		**$89**
Upgrade 15" monitor to 17" Daytek .26dp		$347

POWER PACKAGE

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P-90 Pentium ® processor	$2865	$115/mth
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Canadian Software Development Quick But Dirty

BY GRANT BUCKLER

NB — A recent study of software development in Canada says that compared to their counterparts in other countries Canadians turn out software faster but with more mistakes. To be competitive internationally in the software field the study conducted for the Canadian government said, Canada needs to boost the quality of its software.

The study was conducted for the federal department industry Canada by industry analysts Dr Howard Rubin and Ed Yourdon. They collected data through questionnaires and follow-up interviews and telephone audits, from 227 companies in India, the Far East, Europe South Africa, South America, and the United States.

Rubin and Yourdon found that Canadian software developers were more productive than the worldwide average. The study rated average Canadian development productivity at 111 function points per professional versus a worldwide average of 92.5 function points per professional. The figure for the United States was 88 function points per professional.

However the study also reported that Canada had the highest defect rate at 5.12 defects per thousand lines of code. The worldwide average defect rate is 3.79 per thousand lines of code while the United States made the best showing in this respect with only 2.3 defects per thousand lines of code.

These numbers seem to support the unsurprising conclusion that the faster you write software the more mistakes you make. However they might also reflect the fact that — according to the Rubin Yourdon study — Canadian companies tend to provide less training for their staff than the international average while American companies tend to provide the most training.

The study also noted that a small percentage of Canadian companies have taken part in a process assessment such as that needed for ISO 9000 certification. Only 29 percent of Canadian participants in the study had taken part in such an assessment, while 35 percent of all participants worldwide had done so.

Rubin and Yourdon recommended to Industry Canada that the Canadian government use national certification programs and awards to drive up quality, and provide Canadian industry with tools for assessing its competitiveness and sharing information about best practices in the software field. They also suggested encouraging universities to focus on software engineering and encouraging start-up companies to attract outside investment. ❑

LETTERS *Continued from page 9*

But hey lighten up you guys! This isn't the end of the world. So there's lousy hardware out there so there's lousy software out there so there's lousy computer magazines out there so there's lousy computer stores out there. There's also some pretty good stuff happening.

Pick your face out of that computer screen (or out that page from The Computer Paper) and look around. We live in an imperfect world. Ralph Waldo Emerson said "Everything God made has a crack in it." What did he mean? I think he meant that this world isn't perfect, nothing in it is perfect (or ever will be) and that we should not look for it here.

Does this mean we should settle for crap? No we don't want crap — in computer hardware or computer magazines. God gave us brains so let's use them. The Computer Paper wasn't wrong to publish information they thought would be of interest to their readers and Mr Smith isn't wrong to defend the interests of his company (and its employees). I thank both of you for doing what you do best: your best.

P.S. — I do think The Computer Paper should make us aware of ALL issues, good or bad, regarding our buying decisions.

Bill Irvine Victoria BC, via Internet

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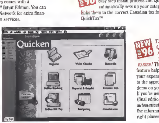

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The Case For Inappropriateness

BY TZVI FREEMAN

One of the major concerns I have about leaving my child alone with educational software is the lack of inappropriateness.

This becomes of special concern when dealing with the very young (pre-seven). Inappropriateness is a vital element at that age. But the fact is, no matter what stage of life, it's always been that talent for inaptness that's separated the maverick genius from the run-of the mill.

Inappropriateness is the small child's most powerful learning tool. Basically, what it means is that a child can pick up any object and try anything with it. Mud can be cake. A block of wood can be a doll. Underpants can be a hat. This is life and its discoveries in their pristine state.

Then, around the age of seven or eight, something very dramatic — and tragic — occurs. It occurs almost universally in every country and in every culture where such things get observed. Mud becomes mud. Blocks of wood become blocks of wood. Underpants come to have one use and one use only. Anything else is inappropriate.

Show a six year old a rock and ask him what he thinks it is. You could be in for anything. Wait a few years to ask him again and it's a rock. And only a rock.

Only a smattering of individuals manage to escape this syndrome, preserving their sense of inappropriateness into adulthood. I don't know how fortunate it is for those individuals — or for the people that have to live with them — but for humanity the dividends are bountiful.

I doubt we would have mathematics, for example, if it weren't for these recalcitrants. Mathematics is all about inappropriateness: you apply the same set of digits and formulas to entirely diverse sets of realities.

And how about original art and social reform and — well, just about anything else requiring non-linear thought. Whether Newton or Einstein, Beethoven or Picasso, Spinoza or the Lubavitcher Rebbe, Karl Marx or Groucho Marx, it was the child alive within them that made those quantum leaps in human thought.

What we want to do, then, is to parachute the child gently into adulthood, holding on tight to that openness of mind to try out the improbable, the preposterous and the patently absurd. We've got to leave always open the option to try out the ridiculous, and even encourage this.

Software just doesn't lend itself to this kind of thing. Programmers don't like users who muck about. We like to design controlled environments where the user becomes just another fairly predictable object. When you stop to think about it, little kids are a real pain for all of us in this industry.

That's why we write for "good" kids. Kids who will press the right button and only the right button. Kids who like to get rewarded and don't like to get things wrong. Kids who are fairly predictable — just not quite as bright as us big people. But also not as promising as the nudnik trouble makers.

Nobody's going to make the killer app of early learning technology this way. What we need is not nice software for good kids. We need great software for rotten brats. We need stuff where kids can discover that by doing the completely unexpected and most inappropriate, you can get real nifty things to happen. We need software where the best solution to a problem is the craziest one.

After all, isn't that just what good ol' Albert did when he decided that everything is relative except for the speed of light, that mass and energy are really the same thing, and time is just another dimension? Sounds pretty crazy to me. No wonder he did so lousy in school. He'd do even worse on Reader Rabbit. ❑

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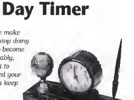
My Day Timer Will Call Your Day Timer

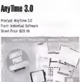
Every year around this time we make promises to start doing this or stop doing that — and generally resolve to become better human beings. But inevitably, come January 2, our best intentions are lost to habit or procrastination. Well, you might have asked yourself, if computers are so smart, why can't they help us keep our New Years' resolutions? Why not, indeed.



What follows is a sampling of software to organize or otherwise improve your life. The rest of this article deals with personal organizers. Elsewhere in this feature, you'll find reviews of family organizers, and personal finance packages. We even take a look at self-empowerment/ improvement and motivational software. But first, let's check our schedules.

AnyTime 3.0

Product: AnyTime 3.0
From: Individual Software
Street Price: $39.99



AnyTime is an inexpensive personal information manager which the company guarantees will outperform any personal organizer in its class or your money back. The redesigned version 3.0 offers a quick tour when you load the program to speed the short learning curve It is mostly intuitive however

When you must resort to the manual, which happens only infrequently the writing and examples are easily understood. The table of contents and index are unusually complete and detailed making finding answers a snap

Some of the new features include autodial from the address book, envelope printing (but not labels), autoschedule and drag and drop The address book has places for anniversaries and birthdays which then automatically appear in the calendar

The address book may be organized by first, last or company name It includes space for notes about each address. The appointment reminder alarm is simple to use Conflicts between overlapping appointments cause a warning box to pop up Appointments and reminders may be shifted from one column to the other Repeating events are scheduled using one icon.

There is a choice of holidays to add to the calendar as a default, but others may be added as well. This is important if you are doing business in the UK and Canada for example Additions are UK, USA Benelux Spain Germany, and France There are 100 printing layouts for the planner and address book. All will print on standard organizer and pocket pages for Day Planner Day Timer FiloFax or Franklin planners Special layouts are available for setting up meeting agendas or travel planners. You may also view someone else's calendar while looking at your own, or they can both be merged This could be useful in covering vacation or illnesses smoothly

Data may be imported from or exported to a variety of programs using CSV (data separated by commas) or TXT files (data separated by tabs)

Platform requirements are minimal — a Windows compatible 386 with 4 MB RAM and 3 MB hard drive space, VGA display AnyTime will operate under Windows 3 1 Windows for Workgroups or Windows 95 — Jean Allen Ikeson

Contact: Individual Software Inc 1-800-331-3313
Distributed in Canada by Beamscope

Janna Contact 95

Product: Janna Contact 95
From: Janna Systems Inc
Anticipated Street Price: $99

The Janna people re-worked their mid-95 Version 2.0 entry to look like and take advantage of, Windows 95 — and tagged those nomenclatural numerals appropriately to the end of the program's original name

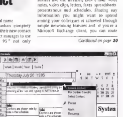
Janna Systems a Canadian company based in Toronto is touting their new contact manager as "the best contact manager to use with Microsoft Windows 95" not only because it's been put into 32 bit form but because it has been designed to smoothly integrate with MS-Office as well as other Microsoft business applications.

This is most evident through a new window called the "Document Manager" which lets you access any MS-Office, MS-Schedule+ or Windows 95 Fax at Work file directly from within Contact 95 There's now full OLE (Object Linking and Embedding) 2.0 support, which will be very handy for users who like to shuffle lots of info about each of their contacts because it means they can link just about any kind of information to Contact 95 to create a complete record of everything they've got on a specific client or listing

And just in case you've got so many objects linked to a listing that it starts to confuse even you you can drag-and-drop it all around in Contact 95's Information Log which lets you get organized through an interface that copies the Windows 95 explorer

Contact 95 can also blend all your pertinent information from a number of different sources like the Internet, LAN e mail voice notes, video clips, letters, faxes spreadsheets presentations and schedules. Sharing any information you might want to spread among your colleagues is achieved through simple networking features and if you're a Microsoft Exchange client, you can route

Continued on page **20**



Conflicts are shown side by side in the schedule

Drag and drop to reschedule an Action Item

Janna Schedule

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If you're already online, email sales@istar ca or visit www istar ca

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INTERNET INC.
CANADA'S INTERNET NAVIGATOR

LEAP AND THE NET WILL APPEAR BUT LOOK BEFORE YOU LEAP

My Day Timer Will Call

Continued from page **18**

your inbound faxes and e-mail directly into your Contact 95 inbox

Other new features include what Janna calls the "Action Item List," which pops up to remind you of appointments, activities and sundry things to do. The nifty thing about this otherwise common ability is that Contact 95 can do it with text (just like most contact managers) or with voice and video alarms in case you've fallen asleep at the keyboard. — Ross MacDonald

Contact: Janna Systems Inc. 800-268-6107

Ecco Professional 3.0

Product: Ecco Professional 3.0
From: NetManage
Price: $150 (est.)

I don't know if there are enough good things I can say about NetManage's ECCO Professional 3.0: it is a truly unique PIM in a class of its own.

ECCO 3.0 is perhaps one of the most robust and easy to use PIMs available and is a superb storage medium for names, telephone numbers, dates and almost any other kind of information. ECCO revolves around a calendar, which can be viewed by day, week, month or year, and a rolodex-style phonebook. ECCO is available as a stand alone PIM or can be used on a network where information can be communicated or shared with your networked colleagues.

To schedule a meeting or add a new contact, just click on the appropriate area and enter the information. Rescheduling a meeting is as simple as dragging a bar, indicating the meeting's time and duration, to another time slot. To lengthen or shorten a meeting time, just drag the bar's arrow: very intuitive!

The phonebook is much what you would expect. It can store various information including phone and fax numbers, addresses, e-mail addresses, etc. The format of the phonebook is hierarchical and includes a search feature. The phonebook also includes a phone dialer which can log calls. You can even launch your word processor from the phonebook and it will enter all the contact's information in automatically... what a time saver! Unfortunately, there doesn't seem to be a similar feature for linking an e-mail address to launch a dial-up e-mail package, although it can link to network e-mail packages such as Microsoft Mail or Lotus cc:mail.

ECCO also includes a utility for calculating time and expenses and even has a timer! Also included are a notebook and a "library" for Internet sites. You can add or remove folders and URLs. Click on a URL or its description, and it will launch your browser to that site.

ECCO Professional is an outstanding personal or workgroup information manager with a strong suite of contact management utilities. Highly recommended. — Roy Charmer

Contact: NetManage Inc., ECCO Division 206-869-5600

Day-Timer Organizer 2.0

Product: Day-Timer Organizer 2.0
From: Day-Timer of Canada Ltd.
8545 Montrose Road
Niagara Falls, Ont. L2E 6X8
Price: $82.95

Continued on page **23**

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My Day Timer Will Call

Continued from page ***20***

Like the company's famous paper-based products the Day Timer Organizer 2.0 software shows a very simple and clean interface that includes scheduling, task management, an address book (including e-mail addresses), notebook and other useful features.

The Day Timer folks say that 85 percent of those who use PIM's in their daily lives also carry paper based planners, so the software allows you to print your schedule, address book and other information and insert it into your paper based Day Timer, Day Runner, Filofax and Franklin products. You can also print mailing labels, envelopes and rolary cards.

Keeping track of Business
I immediately liked the simple interface which I found easy of use. I figured out most of the features of the program in minutes, just by noodling around. Then I took the 10 minute tutorial in the Getting Started Guide and never looked back. I also liked the ability to customize many of the fields to reflect the type of information that is displayed.

The contact management module of this organizer contains a phone log and automatic phone dialing. You can also time your calls and add up to 35 pages of notes. The organizer supports the TAPI and TSAPI telephony interfaces, allowing users to more fully integrate their telephones and PC's. Call handling features combined with the support allow you to use features such as Speed Dial, Hold, Forward/Transfer and conference calling. There is also a caller identification screen that automatically pops up and displays information on incoming telephone calls. Another useful feature is an Expense Organizer to track travel, entertainment and other expenses.

Version 2.0 works with Windows 95 and 3.1 and will even run on a 386. It comes with a coupon for a free upgrade to the 32 bit Windows 95 version, which should be available by the time you read this.

Day Timer Organizer 2.0 sells for $82.95 while the upgrade is $62.95. There are both Windows and Macintosh versions, as well as a lan version. Day Timer comes with a 60 day money back guarantee. — Martin P Waterman

Contact: Day-Timer of Canada Ltd 1 800-295-8777

In Touch with InTouch: The Busy Business Person's Friend

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Product: InTouch 2.5
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1-800-346-5392

"In Touch" describes it neatly. A contact manager should be easy to install, simple to use and it should manage your contacts painlessly. If it fails in any one of these three areas you may as well give it up, as I so often have, reverting quickly and easily to the preprinted Filofax pages and my trusty ol' "human interface device" (read: pen) before I spend too much time and energy on a computer based system that I'll ultimately have to toss or replace anyway.

InTouch 2.5 from Prairie Software meets all my basic requirements and more. For starters, it installs exactly the way all good Mac software is supposed to: you insert the disk, click the full install and end up with a usable application. Period, and thanks for not getting in my face.

Also, InTouch is friendly and easy to use. Prairie Group seems to have assumed (correctly from where I'm standing) that business users are far too busy doing business to want to spend a lot of time fiddling around with their software. The box sports a happy cartoon of a well-adjusted computer doing its thang. The manual is cleanly typeset, logically laid out and succinctly written. And it gets better from there. That easily installed software is straightforward and ready to go to work the minute you install it. Post installation, the program not only manages your contacts, it dials or faxes them for you and

➤

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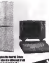
prints to pages th[illegible] your standard Filofax or Daytimer. Also, InTouch interfaces neatly with most calendar programs, especially Prairie Group's own Dateview.

I do have a couple of quibbles with InTouch. They're minor, but I'd love to see them dealt with for the next release. On the upside, InTouch boots from the Apple menu which is exactly where I want it to boot from. When I shut it down, it boots back to where I left off. The quibble is, I'd like also to be able to double-click on my personal contacts file of choice from the finder. Simple enough, [illegible] but InTouch won't let me do it.

Another peeve. Mac programs have always demanded that you open a file from the file menu, first from the left as you sit at your Mac. For some unexplained — and perhaps unexplainable — reason, InTouch has you open, save, save as and make a new file from the InTouch menu which is third from your left as you sit at your Mac. Go figure. Since all but the save as commands can also be handled by the same keyboard commands used by other programs to perform the same functions, this isn't a horrid inconvenience. But it does seem a bit silly to buck a precedent that seems to work quite well for everyone else.

Again, however, the quibbles are small and do little to detract from the well-designed program. InTouch does all that it claims, and more. Yes, it can also help you track recipes, plot class reunions and keep track of your taxes. From my standpoint, what InTouch does best has been said again and again: it helps you stay painlessly In Touch. It doesn't need to do more than that to keep me fully sold. — Monica Stark



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Microsoft Schedule+ for Windows 95

Schedule+ is Microsoft's personal information manager. It comes as a stand-alone application or as part of Microsoft Office. Schedule+ Version 1 was received with little excitement and generally considered a lightweight in the PIM category. Compared with full featured programs, Schedule+ lacked many functions. Schedule+ for Windows 95, however, is a competent product that is very flexible.

Schedule+ defaults to a Daily view of its day planner. Along the left side of the screen are five tabs for Weekly, Monthly, Planner, To Do and Contact. Various tabs can be added to place often used areas at your finger tips. The weekly and monthly views are zoomed-out looks at your upcoming events. Recurring events can be scheduled on a daily, weekly, monthly or annual basis.

The To Do list is much improved. Your To Do items can be broken into any number of categories, assigned a priority number, an overdue time, a percentage completed amount or an amount of time needed entry. You can view the tasks by overall priority number or priority within each category. Items which become overdue alert the user of their pressing nature, turn red on the list and roll over every day until dealt with.

The Contact List accepts two addresses, numerous phone numbers, faxes, birth dates, marriage date, spousal information and an area for notes and personal info. Of course the list can be ordered by any category, alphabetical or numerical.

One of the most interesting features of Schedule+ is its Seven Habits tools. This is a small program which tries to help you prioritize your life. The tools are a series of read, consider and answer sessions which work to make you define your goals and principals in life.

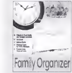
You are queried about such things as your feelings about time and family and work and other daily events. Then a draft mission statement is created. You work with the program to fine tune the statement, then are prompted to review what you have stated as important for yourself.

As potentially cheesy as this is, it works. Considering where your time goes and what you do with it does help in our hectic world.

— Rod Lamarand ❑

Snoopy Organizes Your Family

Product: Peanuts Family Organizer
From: Individual Software
Street Price: $32.95



Peanuts Family Planner is designed for family groups and typical family appointments and activities. For any particular date, you may add columns and icons for up to six members of the family using Peanuts comic strip characters. I chose the Red Baron for the six-year-old, who we are trying to discourage from becoming a commando, and Pigpen for the 15 year-old, for obvious reasons.

Comic strips may be printed on the weekly, monthly and yearly calendars. Icons also distinguish sports, music lessons, doctors appointments, chores, etc. Perks such as these make the program fun for children to use.

The message centre is useful for families. It has many features common to most planners along an excellent repeat option (e.g. every second Tuesday of the month) schedules, to-do lists, address books, notification of conflicts, rescheduling or adding the same event to more than one member, and the ability to attach notes to events or contacts. Individual Software rates the program as intuitive for eight year-olds and up.

Many families post weekly chores for the children on the fridge. This program would serve as a great format with sports or music practice, dentist appointments, birthday parties, etc. added. The entire family will print on one page for each calendar. Time blocks are sized to correspond with the length of the event.

Printing is a mixed bag. The weekly and monthly calendars print as you would expect. For the daily schedule, it is a different story. The higher the resolution of your printer, the smaller the print. It will print in color, however. My Epson dot matrix (1170) printed it with normal-sized type but the calendar ran on to the next page (it doesn't do this for the other calendars). Move up to the Epson Color Stylus and you get color for the events but the type is about 1 mm high. Even worse was the output on our Laserjet 5MP: about 0.5mm high. It's time for the magnifying glass. Other than this bug, you should find Peanuts Family Planner a useful way to teach your children how to budget their time, plan in advance and learn organization.

Peanuts Family Organizer is available for Macintosh and Windows platforms. — Jean Allen Ikeson ❑

Peanuts Family Organizer Individual Software Inc. 1-800-822-3522 Distributed in Canada by Beamscope

Your Life on a Computer Screen

BY JEAN READ

Product: Family Time Use Software
From: Ohio State University
Price: US$50

Do you find yourself in a perpetual time crunch? Did you just make another New Years Resolution to work out at the gym more often, only to discard the idea because you couldn't fit it in to your already jam-packed schedule? Well, help may be at hand! A software package called Family Time Use offers users a break-down of where those 8,760 hours go each year, and it provides suggestions on ➤

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Family Time Use offers a breakdown of where those 8,760 hours go each year

how to make more effective use of them

The software targets families, and was initially created for classroom use It is available through Ohio State University for US$50 The program zeroes in on how members of a family share responsibility and manage household tasks After moving through a series of questions, a user receives suggestions based on the information they have supplied For example, if you had a high percentage of time taken up by personal maintenance one suggestion might be to take yourself to the hairdresser for a low-maintenance haircut

A user is asked to allocate the time they spend in each 24-hour day on five categories of activities

- personal maintenance, which includes sleeping and personal hygiene
- home production which covers child care, house cleaning, food preparation, clothing care marketing, management, yard and car care
- paid employment which includes commuting time
- education, and again commuting time is included and
- leisure activities, which include such activities as church, sleeping, TV, movies and sports.

The program builds up a profile of each family member's use of time by prompting you to respond to a series of lifestyle questions about house size, whether you have one or two cars, the ages of your children your job commitment and chores such as lawn or garden responsibilities The program offers samples (which you can modify) of time use for tasks such as food preparation based on data from studies

If a user has an unwieldy distribution of time the program may suggest changes such as reallocating certain tasks or increasing the use of an external service like a cleaning service

Eva Bradshaw a research associate at Ohio State, points out that "Increasing the use of services comes with an increase in cost, which may not be an option for limited-income families. Trading services with someone else is a way each of you can receive benefits without spending more money"

Another option would be for a person to lower the care level under household tasks, thus freeing up time This would be achieved by for example choosing not to clean as often (a choice I particularly favour!) or finding more efficient ways of cleaning

Educational Tool

The program is also sold as a teaching kit called It's About Time, which includes the Family Time Use software The package with resource guide and other teaching aids, is used as an educational tool by social agencies in the US, China and South Korea and in university classroom instruction in the US and Canada It allows students to work through various scenarios For example they can assess the impact of children on the amount of time spent on household tasks. As children grow and take on certain household responsibilities, the amount of time parents spend on the tasks may be reduced. The program can also be used as part of a life insurance exercise to examine the impact the death of a spouse would have on the distribution of work in a household

Family Time Use is designed for educational purposes and the authors caution that it is not intended to be substituted for individualized professional help However I found it a very interesting exercise to work through At the end the program lays out your life on a computer screen with totals and percentages of hours spent each week month, and year at home work and play It does show you where your time goes and if knowledge is power then this program does give you the power to make lifestyle changes ❑

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The Heavyweights: Maximizer 3 and Act 2.0

BY PEDRO ARRAIS

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Act! for Windows 2.0
From Symantec
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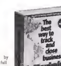

Contacts to the Max

Maximizer 3 by Modatech is a full bodied contact manager that keeps track of your customers and prospects. It excels particularly if you have a lot of contacts within a single business or organization. Scheduling is another strong feature.

When you set up a meeting, the calendar will check for conflicts and schedule follow up appointments. The searching is fast with user definable fields. It even has a built-in word processor from which you can fax letters, etc. (It also has the ability to import graphics into the document.)

Unlike ACT! Maximizer's windows are scalable letting you maximize (sorry) the most important information for you. Conversely you can have a multitude of windows all running at the same time if you wish. The window's colors can be customized, and you have the option of choosing a variety of cute activities icons.

The program also comes with customizable pre-built contact templates for real estate, basic sales, technical sales and finance — or you can create your own. It allows you to track your expenses, a feature not found in the current version of ACT! You can also run Maximizer on a LAN. Maximizer ran smoothly under Windows 95 and does have an uninstall function, a nice touch. Another feature to gladden the heart is a backup utility for files, individually or all at once.

Surprisingly, telephone support was weak — the program doesn't auto-dial the selected number. It just displays it on the screen. Apart from that deficiency, it is an excellent tool for sales types. With a street price almost $100 less than ACT! it is a bargain. One last note to you patriotic sorts, Modatech is a Canadian company with its head office in Vancouver.

A Class Act

The standard against which PIMs have long been measured is Symantec's ACT!, one of the originators of the PIM category. The latest incarnation is version 2.0 for Windows ($249.99).

With all the features it possesses it can initially be intimidating for the first time user. Fortunately, a comprehensive tutorial gets you up and running fairly quickly. While not as flexible as Maximizer in being able to customize your screen, ACT! is nevertheless highly manageable. Although you can only see one screen at a time, most of the most important information is displayed there so you don't have to switch from window to window looking for your information.

While Maximizer has an unlimited number of user-definable fields, in most cases ACT!'s 15 fields are as many as anybody needs. The program's drag-and-drop feature allows the user to quickly move a name onto the calendar. You can also define groups of contacts for mail-merges or easy retrieval.

The integrated word processor won't make anybody get rid of their Word or WordPerfect programs but is adequate for generating faxes, e-mail and short business letters. The program also allows you to e-mail from inside the program and maintains a log on all your correspondence and phone calls.

I found it annoying that the program forced me to type out the area code even on local calls. That aside, you can call up a contact history or notes you wrote the last time you had a conversation with the contact. You can also schedule activities by the day, week, or month and print for most popular paper organizer formats. ACT! is also networkable and can share info with Macintosh ACT! users, too.

If you are using a laptop, ACT! only requires 5 MB of space and can run on as little as 4 MB RAM on a 386 machine. For those who do not need such a powerful program, or if hard-drive space is at a premium, there is also 1stACT! a scaled down version of ACT! that takes up only 2.5 MB. If you have the HP 95LX or the HP100LX Palmtop, there is even a version that takes up a paltry 150K! Easy to see why it is the market leader. ❑

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Help for Those Who Help Themselves:

A Cursory Peek At Some Self-Help Software

BY ROSS MACDONALD

I'm okay and I'll suppose you're okay... but I'm not nearly so sure about this software.

It seems to me that self help books proliferated through the 70s and 80s like fun loving bunnies on aphrodisiacs. And we can lay consanguine blame for that furtive phenomenon directly at the feet of good ol' Dr David Reuben. Remember him? The iniquitous trend setter who came up with Everything You Ever Wanted To Know About Sex... But Were etc. etc. However, where another good ol' doctor — Westheimer of course — now commands the climax of that carnal category, loads of others have been busily seducing us with their own ideas on how to run, fix, improve, control, direct and generally manipulate any aspects of existence which make us feel impotent because they're paradoxically too hard.

Personal expectations are higher than ever and those swollen self help sections crowding the bookstores are a mere manifestation of the addiction we've developed to go for the quick fix.

But this is the golden age of digitization, a time when books just don't cut it with us baby-boomers anymore. And even though most instructional computer stuff constitutes little more than electrified books, people prefer to pay, it seems, for mylar encryption over cellulose and ink.

Book publishers have now cottoned on to that. So I recently spent a few too many hours with a few too many self-help programs to get an idea of just how this category of computerized literature is developing. I had 14 titles at my disposal — and disposal became tempting indeed by the time I was finished.

Which is not to say that self-help literature should be discarded as a genre, rather that the computerized versions should be approached with the same amount of caution as the readable renditions of yesteryear.

Despite having so many titles to look at, it should be noted that only three individual publishers were represented. It's a sure bet I didn't even scratch the surface of what's available in the self help category, though I don't imagine there's too much variation in the features available within the limits of current multimedia. The software I got to play with included

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- 10 CD-ROM titles from The Wilson Learning Corporation
- three titles on 3 5-inch diskette from Insights Software
- one CD ROM called The Ultimate Voyage from Human Dynamics Inc.

Of course it wasn't possible to explore the entire contents of every package but I was able to get a good feel about (if not from) each through the time we spent together

Keeping Your Cool Electronically

The Wilson Learning Corp is clearly the most firmly established of the pack They've been offering publications and consultation services on this sort of thing for more than 27 years Now major players in the self help CD-ROM game they've published a series of 10 titles for both Macintosh and Windows divided into four general categories to cover every aspect of your personal and professional life

Personal Skills. Connect for Success Keep Your Cool

Management Skills Relate With Ease Decide For Sure You Can Lead

Sales Skills Sell To Needs No Trust? No Sale! Start To Sell

Life Skills Create Your Dream Job Repacking Your Bags

All are available through retailers at an estimated street price of $69 95.

A quick peek showed that The Wilson Learning Corp has applied a somewhat unified format throughout Each topic is presented as a miniature multimedia course comprising explanations simulations then applications of what you're supposed to have learned Text, charts illustrations and video liberally commingle to help you along

When selecting examples to review I was mysteriously drawn toward Keep Your Cool and Create Your Dream Job (this writing business gets on my wick sometimes) Keep Your Cool essentially explains how we blow our stacks in a process involving three combined factors Activation + Belief = Consequences Activation is the thing that burns your butt. Belief represents the set of personal principles that has been aggravated and consequences are well whatever happens when something contradicts your beliefs and burns your butt.

Of course the Wilson people don't try to change your beliefs — or ethos or sense of protocol or whatever you might call it — instead they lead you toward understanding the process of losing your cool in the hopes that this will lead to improved self control This is all well explained through the text and charts simulated situations and exercises

The most curious exercise gives us the chance to act as therapist to six historic figures by challenging their assumptions and emotions and helping them manage their emotions more effectively You'll have the opportunity to analyze Michelangelo Joan of Arc Thomas Edison Catherine the Great Isaac Newton and Marie Curie Whatabunch!

Michelangelo for example complains that "As if-a I don't have enough a to do awready! Now they want a me to paint the whole a ceiling of the Sistine a Chapel!" You take it from there and hopefully come out of the exercise with a better understanding of yourself

Despite the more universally topical appeal Create Your Dream Job is unfortunately less attractive because the self-evident contents are suited only to those whose age — or IQ — is under 12 Again using celebrity filled hypotheticals one notable quote I found had Amelia Earhart advising the fictional character Mary with "The key to best using your talents is finding out what your talents are" Duh The fictional Jim is similarly led to his passions by Albert Einstein while the fictional Bill gets advice on values from Henry David Thoreau

And again there's a formula Talents + Passions + Environment x Vision = What You Want To Be (when you grow up) This time around talents are your skills and abilities passions are the things you feel strongly attracted to environment includes your preferred working conditions (e g. office versus outdoors) and vision is what you see as the ideal result of combining the previous elements (I think)

I may not have a handle on all this but the variability of usefulness I found between these particular packages suggests the need for a peek before-you buy approach to any in the series.

Soft Insights

Next in line came the three 3 5 inch diskette based packages sold under the name SuccessWare by Insights Software I'm told there are 16 titles in the series all based on famous self help books. Among them are *The Sky's The Limit* by Dr Wayne Dyer, *The Magic*

Continued on page **32**

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Software

Windows 95 Cd OEM	$ 155
Dos 6.22 and Windows 3.12 CD OEM	$ 200

Self-Help Software

Continued from page **30**

of Thinking Big by Dr David Schwartz *The Leader in You* by Dale Carnegie & Associates *Success Through a Positive Mental Attitude* by W Clement Stone *The Power of Positive Thinking* by Norman Vincent Peale and *The Greatest Salesman in the World* by Og Mandino. I can't help but wonder what Og sells

Additionally what I had on hand was *How To Win Friends and Influence People* by Dale Carnegie *Chicken Soup for the Soul*, by Jack Canfield and Mark Victor Hanson, and something called *Pure Motivation* — inspirational quotes from all over the place.

All titles are available through retailers at an estimated street price of $19 95

It s just as well that these are considerably cheaper than the Wilson batch because they re a lot less sophisticated The boxes are rather more threatening however with their purchasing lure that reads "Imagine unlimited wisdom from the greatest collection of self help literature ever written embedded CONTINUOUSLY [emphasis their's] into your subconscious mind " I can t guess how yours works, but my imagination doesn t find that prospect at all appealing

However just as with the Wilson Learning series, the disks I received were closely akin in structure and features which I presume permeate the entire catalogue First each diskette gives you 365 quotables from whichever self help book was used as the source. As the number suggests, these are set to pop up onto your screen on a daily basis throughout the year and get you going with stuff like "People who say it cannot be done should not interrupt those who are doing it "

The real kicker here is that you can set these pearls of wisdom to swipe all day at variable intervals or you can pick any particular favorite to persist in perpetuity

By including a number of different backgrounds for the text — waterfalls oceans rainbows etc — and letting you hear sounds too (three WAV files are provided or you can add some from your Windows directory) Insights Software thinks you'll be even more attracted. Of course you can print any of the text you like as well as cut and paste it into any of your documents. As a final attraction the text can be used as a screen saver too

Which brings us to Pure Motivation a simplified package which follows the same principle as all the book based titles above but taps into 1 000 quotables from all sorts of different sources such as (and I quote) " the nation s leading authors motivational speakers, business leaders and successful entrepreneurs " Walt Disney, for example tells us that "All of our dreams can come true if we have the courage to pursue them " Dr Joyce Brothers on the other hand says "Success is a state of mind If you want success start thinking of yourself as a success "

One extra feature in Pure Motivation is something called The Initial Quote of the Day Every time you turn on your computer you'll get a randomly chosen motivational message.

If you re familiar with any of the books on which this series is based you likely see an appeal here which, I confess, remains stubbornly hidden to me.

The Voyage Continues

Finally, and of an entirely different sort comes The Ultimate Voyage — a CD-ROM created by Human Dynamics Inc and published by EduDate According to a psychologist friend of mine human dynamics is an established psychological model applicable to both individuals and groups and which according to the publisher has been employed by a great number of large corporations including DOW Chemical International Semiconductors and Ontario Hydro This disk is available through retailers for about $50

Essentially the central goal of Human Dynamics is to learn how to best communicate with other people The model was developed by Dr Sandra Seagal (Ph D) and David Horne (MA) who collaborated to determine that all people fall into one of five personality types each of which communicates thinks and learns in an entirely different fashion

Ostensibly by figuring out which of the five personality types you are, and how the people from the other four types operate differently from you you will communicate better and so have better relationships personally, socially and career wise

Here in a nutshell is how Human Dynamics works We all have three main elements to our personality mental physical and emotional Each of us is centered around one of those three It turns out there are actually five personality types overall, though because mentally centered people can be either physically mental or emotionally mental and emotionally centered types will be either emotional subjective or emotional objective

Now I'm not going to run a personality analysis for you here — you ll need to buy the CD ROM for that — but you can find

➤

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out which of the five you are by determining how you learn, communicate and process information.

If you're mentally centered, you do things in a linear fashion. You like to know the purpose and direction of what you are doing and get frustrated if you don't. Seagal and Horne figure only about five percent of the world's population fits here.

Physically centered types prefer to amass all the information they can get on a topic or problem then gradually process it into a coherent and organized whole. About one percent of us do that.

Emotionally centered people are all over the map — snatching and catching bits and pieces here and there but eventually also achieving a satisfactory end.

Finally, emotionally centered people are all over the map — snatching and catching bits and pieces here and there but eventually also achieving a satisfactory end. Not surprisingly, that's where you'll find the other 80 percent. Though we all do all of these things at different times, one method will predominate.

After using this disk I'm pretty sure I'm mental.

This is unquestionably the slickest of all the packages I played with. The graphics are superb, the interface is exceptionally helpful and it provides clear guidance through the Human Dynamics process. Yet it still lets you wander as your fancy dictates — in case you're of the emotional bent.

There are more than 60 minutes of live action video to illustrate the Human Dynamics principles, coupled with another 60 minutes of audio to help you along, too. Perhaps more salient are the interactive self assessment tests and hundred+ pages of printable text.

The only unsavory aspect to The Ultimate Voyage is that, slick as it is, the whole thing made me feel like I was participating in one big infomercial. Or worse, some kind of cult-type indoctrination. However, among all self-help titles in my heretofore collection, this is indisputably the most engaging.

Buying self help software is obviously a very personal decision. The examples I've seen demonstrate styles and goals as diverse as the people who make up the market. If self help book sales are anything to go by, that market is frighteningly huge. Indeed, such popularity is readily explained by the comparative cost of a disk — or book — versus that of a genuine therapist. But even with that, I'm relieved to get this stuff for free.

Trouble is, I'm no longer sure I'm okay. ❑

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Financial tools for the bean counter in all of us

BY ROD LAMIRANDE

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Simple and powerful are two words that could describe today's personal financial software The last few years have seen an evolution in money tracking programs for the home user. Current offerings from Microsoft, Intuit Computer Associates and others are easy to navigate, customizable and truly useful. Nothing facilitates the organized management of money better than the computer. The power of newer desktop machines, and the ubiquitous nature of CD-ROMs, is allowing software makers to build products that are amazing and friendly Anyone, from a sophomore to a surgeon, can plan, budget and track their money with one of the personal financial management programs reviewed here

Simply Money

4Home Productions is a division of Computer Associates Canada Ltd. and has an offering for your money tracking called Simply Money Simply Money is a Windows program written for 3.x and higher. It comes in a variety of different versions. You will find *Simply Money* by itself or bundled with either Brian Costello's HomeTax or a copy of David Chilton's famous financial novel/guide *The Wealthy Barber* Both of the bundled versions are useful The novel is a wonderful introduction for the financial novice and a must read for most Canadians. HomeTax is a popular Canadian software package that will be reviewed in our upcoming annual survey of tax software

4Home Productions claims that over a million people manage their finances with Simply Money This is likely true. Simply Money is sold across North America and is one of the larger financial programs for private use Like almost all of the programs here, Simply Money is written for the American market with some minor adjustments for sale in Canada This is not surprising considering the size of our market — Canada has roughly the same population as the state of California Any company large enough to invest the capital in developing programs as sophisticated as the top financial programs has to have a big market.

Unlike Microsoft Money and Quicken, Simply Money doesn't use the metaphor of the cheque book. The Simply Money interface is a wonder of simplicity Lying on a felt green tabletop are various icons divided into Income, Payee and Accounts categories Along the bottom of the table are a number of icons representing actions To enter a payment, or a deposit, the user simply grabs the appropriate icon and drops it on top of the correct account icon Similarly dropping an icon onto an action icon performs that function. There is an account register that can be viewed and information can be entered there as it usually is in the other programs in this review. However, the intuitive (sorry Intuit) object-oriented style of Simply Money is extremely easy

Behind this apparent simplicity is a full featured number crunching application Simply Money is no slouch when it comes to complex financial organization or detailed analysis Simply Money can set up and maintain all types of accounts, liabilities, assets, investments, credit cards or anything else. There are practice sessions and Newcomer Hints for the beginner a Financial Scheduler and numerous loan and mortgage calculators; and charts and graphs galore Simply Money will create dozens of different reports which you can save or print For the Canadian version Simply Money has set up tax categories and reports based on Revenue Canada forms In fact, the program is complete enough to be used for a small business. One whole section of the manual is dedicated to helping you use Simply Money for business

As much as they have tried to make it otherwise this remains an American program Electronic Bill Payment and Banking is an integral part of the program and it is unavailable to Canadian users. (Technically speaking, this is not true It is possible for Canadians to use this feature only you must have an American bank account and be interested in paying American payees!) Also, although it is not that difficult to set up a system to track GST or PST, it is not a function already included I can't help but think that this would be a relatively easy function to incorporate by the developer.

Simply Money comes on floppy disks and is not a hard-disk hog It will run on a 386 just fine and yet is powerful and full featured. There are a number of utilities to help you plan your financial future and assess your current financial health Simply Money gets bonus marks for its excellent manual The only program in this review to include a full length complete manual Simply Money, even without *"The Wealthy Barber"* or HomeTax, is a good choice

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Microsoft Money

Microsoft Money for Windows 95 is the little boy that made good. The earlier 16-bit version of Money written for Windows 3.x was seen as a decent program but somehow not the real thing. That version was the skinny kid on the beach that kept getting sand kicked in his face. The application doing the kicking was of course Intuit's Quicken. Considering that in Canada 60 percent of homes that use personal financial software use Quicken, it is easy to see why the rather banal Money never got any respect.

But no more. Microsoft learned from Quicken and even while they were trying to buy Intuit developed a 32-bit program that will go head to head against all comers. Money only runs on Windows 95 or Windows NT but the new program is powerful and beautiful. Not only that, but to insure that Money would take a bite out of that big muscle bound beach kid, Microsoft gave it away for free in September and October. During that time the program was being downloaded from the Microsoft Network or the Microsoft Web site at a rate of once every seven seconds! Now selling at a low 50 bucks, Microsoft Money is aggressively prowling the beach.

Microsoft Money wants to be your one stop finance shop. It begins with a Contents page which is as aesthetically pleasing as any interface I have ever seen. In fact the whole program is gorgeous. From the Contents page a user can select from the Account Register, Payment Calendar, On line Banking Services

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Financial Web sites

ROD LAMIRAND

Aside from the information that you can find as part of your financial software program there is a whole world of information available on the World Wide Web.

Many banks, credit unions and investment houses have Web sites with a wealth of different material. Some sites are mostly advertisements listing information about an institution's size, services, locations, areas of specialty or contact information, but most offer more.

At some locations you can get current data on currency rates or the prime rate. Mortgage rates and mutual fund returns are often given. The Toronto Dominion Bank and others have question and answer pages that will assess your knowledge level and guide you to appropriate material to help you learn more.

Some of the features found in your financial software, such as loan amortization or calculating retirement income, can also be found at the Web sites below.

The following list is not exhaustive; there are dozens of sites concerned with mutual funds, for example, that are not included. What is here are some of the many Canadian Web sites for you to explore and learn from.

Yahoo server main bank listing: http://www.yahoo.com/Business_and_Economy/Companies/Financial_Services/Banks/

Bank of Montreal: http://www.bmo.com/

Canada Trust: http://www.canadatrust.com/

Laurentian Bank of Canada: http://www.mortgagestore.com/laurent/laurent.html

Royal Bank of Canada (French or English) http://www.royalbank.com/

Toronto Dominion: http://www.tdbank.ca/tdbank/

Vancity Savings Credit Union: http://www.aurora.net/vancity/homepage.html

First Canadian Fund News: http://www.fcfunds.bomil.ca/

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Like Quicken Microsoft Money uses the cheque book interface to print cheques and enter data Also like Quicken Money would like you to purchase cheques for your printer from them AutoEntry where the software fills in cells based on the first few letters is available as are most of the ease-of-use functions first pioneered in Quicken. Every type of account and payee can be set up with some though not many, reports and charts available.

Money has most of the key functions that its peers have but its strength is in easy to use functions and an elegant interface There are not as many reporting functions or as great a variety of charts and graphs as in either Quicken or Simply Money Like the others Money advertises On Line Banking and like the others it cannot deliver in Canada. Money also advertises On Line Registration which it did deliver — small consolation

Money also does not come with a manual of any sort and is not customized for Canadians in any real way Canadian users can check out the Microsoft Money forum on the Microsoft Network but they could also do so without Microsoft Money Money like Simply Money, will import from Quicken and even keep all your individualized group categories

Microsoft Money is a CD-ROM based program that has great Planning Wizards to help you calculate any number of personal scenarios. It is well integrated with appropriate sounds tied to system events It can be customized to create many categories on top of the well-chosen default selections Investments portfolios stocks and bonds savings for retirement, school or purchasing, all are simple and well thought out Microsoft has brought us a great useful easy American software program

Quicken 5 Deluxe for Windows

Quicken is the Mother-of-All-Money Programs First to overcome the traditional rows and column approach to money management Intuit built its success on an intuitive metaphor the personal cheque book

Early in the era of Windows 3 0 Quicken was a one-man show in the puny home market of finance tracking New versions followed each year with improvements and added features, as the PC invaded the home, until today when Quicken dominates the market with over eight million users From the Alaskan Pan Handle to the Florida Keys from Hawaii to Newfoundland whether DOS Windows or Macintosh Quicken defines this field It is not hard to see why Each time others try to catch up to the features and depth of Quicken Intuit releases a new version. Quicken 5 0 continues this tradition with one of the most extensive and innovative programs to date

Quicken 5 Deluxe is a CD ROM based Windows program that will run on 3 1 or 95 The Macintosh versions are identical to the PC versions in every way except for the version number and standard Macintosh conventions. The opening screen for the collection of programs that come with Quicken 5 Deluxe is called Quicken Deluxe Gateway Icons for the Onscreen Manual, Video QuickTours, Investor Insight, Mutual Fund Finder, the Financial Directory Personal Profile Ask the Experts, Finance 101 and Home Inventory are all here as well as the icon for the Quicken program itself The number and range of features in this package is amazing

The Onscreen Manual replaces the past practice of including a regular text manual and it does a good job, although it will be some time before most of us will accept this new practice Video QuickTours are video files featuring Intuit employees explaining common Quicken functions Investor Insight and Mutual Fund Finder are stock and mutual fund mini applications to help you make sound purchasing decisions These programs tie into financial information services which of course, are fee based and American The Financial Directory is a list of all those American banks that offer on-line banking and automatic up-dating of your credit card Of course as with the other offerings reviewed here, you can t use this feature in Canada

The Personal Directory is where you enter your personal information. This is useful because when you then go to Ask The Experts and ask a questions, the responses are, to some degree based on your age and income level Ask The Experts is an enlarged version of Quicken 4 0 s popular Q and A feature Here two American financial experts dispense general financial advice on matters such as educational funds stocks and bonds, mutual funds, RSPs and the like Finance 101 is a step by-step primer on the basics of sound finances but it is quite useful Lastly Home Inventory takes the user through each room in the house and helps him or her take stock of their belongings I quite like this useful little program.

Within Quicken itself there are some improvements. QuickTabs puts the features you use most at your fingertips Tax Link Assistant helps you match your Quicken categories to Canadian tax form line items

To assist you even more and get you to buy another Intuit product there are improved links to QuickTax, the newly renamed WinTax HomeBase is the central living space for Quicken From here your registers reports and graphs, budgeting, investments and accounts lists are accessible Once in the register there are a number of small user interface improvements that overcome one of the criticisms of previous versions.

Version 5 0 users often complained that account windows would hide other windows

Continued on page **39**

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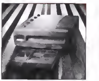

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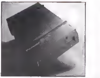

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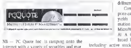
BY BOB WOODS



NB — PC Quote Inc is ramping onto the Internet with a variety of securities and market quotation services company officials said. Already Internet World Wide Web users can get a free taste of those services through the company's beta test site

One of the new services called MarketSmart, is described by company officials as a Web-based "market site information site for nonprofessional investors" All of the new services will use both Web browsers and other applications and will be targeted at both the general consumer and the investment professional "With plans to dramatically expand our Internet presence millions of online investors will have access to the same high-quality financial information previously available only to professional and institutional investors

Web surfers can access http //www pcquote com to look at the site

When Newsbytes accessed the PC Quote MarketSmart site we were able to look up a variety of financial tidbits The real time Dow Jones Industrial Average (DJIA) was prominently displayed at the top of the introductory page A QuoteWatch section allows users to access the delayed stock prices of up to five different companies

Company details like price-earnings ratios stock yields and dividend information can be looked up via MicroWatch Also, "Market At A Glance" provided a broad base of information including active stocks on the New York Stock Exchange the American Stock Exchange and the OTC (over the counter) exchange averages from companies like Standards and Poors, and Dow Jones and the average from Japan's Nikkei exchange

Future MarketSmart features will include access to important stock indexes statistics and charts for stocks mutual funds futures indexes and cash markets Also industries like computers, communications, and retail will be able to be spotlighted. Some newsletters will also be uploaded to the site

Beta tests of other Web services were being tested in December and the intention was to have them formally introduced in January 1996 Pricing has not been revealed yet for the services but Morgan said the new services will have increase the company's black ink in the revenues column "We have been asked about the increased trading and price appreciation of our stock and while we can't be certain we think two contributing factors are the increased awareness of PC Quote as a key Internet player and our recent full listing on the American Stock Exchange" said Morgan ❑

Financial Tools

Continued from page 36

causing confusion and time loss The use of tabs and account buttons solves this problem nicely In the area of charts and graphs Quicken is as good as ever but there are now more preset options and columns can be hidden from a report printout — a useful option

Quicken 5 also comes with a copy of Netscape Navigator which you can install to replace your current web browser The browser is meant to move more Quicken users online so that they can access the Quicken Financial Network (http //www intuit com/quicken) The site can be accessed by anyone and contains much information aimed at users of Intuit products.

If there is a criticism of this software there is only one Intuit should either customize its product more for Canada or they should work out something with Canadian financial institutions The process of entering one's transactions has never been easier but it will never be as easy as an automatic account update through on-line banking It is aggravating to constantly see an icon for a service that you can't use

Still intuitive much improved visually and with every bell and whistle Quicken has it all There is such a depth in this product that there is insufficient space to even mention many of the features Suffice to say that Quicken Deluxe 5.0 and the pared down Quicken 5.0 remain king of the hill to date

CanPlan Personal Edition

The mouse that roared award goes to Henry Zimmer's CanPlan CanPlan is billed as your Canadian financial planning software for Windows This little program by Springbank Publishing, out of Alberta is the only truly Canadian planning program in this review The one floppy program takes up only 4 MB of space (Quicken leaves almost everything on the CD and still uses up over 17 MB) CanPlan doesn't use any fancy cheque book metaphor it doesn't have sound files and videos It doesn't do everything for everyone and frankly speaking, the interface isn't very good The conventions are irregular and the program demands you do things its way

For all that though, it does have something going for it If you follow the small but well written manual and fill in all your personal information you will get a very accurate assessment of your financial situation Completely written for Canada this small program keeps track of things like UIC and CCP You can perform all the money planning activities that you might need Saving for a fixed amount loans, value of loans in the future retirement planning, all the information that you might possibly need to calculate your personal assets and liabilities for now and the rest of your life are here A little awkward not for the faint of heart, and certainly not an account tracker CanPlan is a real tool Springbank Publishing offers you a small precise unhandsome Canadian financial planning program ❑

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- Okidata OL-600e and OL-610e
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- Raven LS-3 and LS-5
- Sharp JX-9210

To many of us the word *budget* has negative connotations, as though buying something on a budget implies that you are going to make compromises and settle for less than the best. No-Name Ketchup instead of Heinz, a Yugo compact car instead of a Lexus. When it comes to printers for the home or SOHO market, however, budget takes on a whole new meaning.

Although budget is the name of the game, quality hard copy is now available at a realistic price. Vibrant color and crystal clear black text can be had for a fraction of what you would have paid a few years ago. Perhaps more than in any other product category in the computer market, personal printer quality has gone up and price has come down. With a budget of between $500 and $800, you can take home the printer that you want the most without worrying about settling for less.

The Inkjet, Laser Debate

If you are in the market for a light duty printer, i.e. one that will be printing under a thousand pages a month, you may be trying to decide between a laser and an inkjet printer. In the SOHO market, most people are choosing inkjet printers over lasers, by a margin of more than five to one, according to the major manufacturers of both types of printers. However, each buyer has to determine the best solution for his or her own situation. Personal inkjet and laser printers offer their own distinct drawbacks and advantages. Here are the common considerations for choosing between the two.

Print Quality

For output of text only black and white documents on plain paper, a laser printer is still your best bet. The quality of text print from the two mediums is certainly getting closer, but for clarity, laser or LED technology still has the edge. Furthermore, to achieve the best output from inkjet printers you need to use special coated paper, which usually commands a price premium over regular laser paper. Laser printers, especially newer models, still offer higher resolutions than inkjets, although the difference is narrowing.

Speed

Current models of laser or LED printers typically have a fast RISC processor on board to speed processing, and all laser and LED printers use print technology that lends itself to creating a page quickly. Personal lasers range in speed from four pages per minute to eight pages per minute, while inkjet print head technology is still generally slower. Inkjets are getting faster, however, and some of the leading manufacturers claim that the next generations will be more directly competitive with the speed of laser printers.

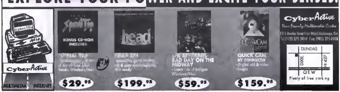
PostScript

PostScript is a page description language designed to allow the highest quality of type and graphics to be printed from your computer. For the ordinary user, it's a factor only if you are intending to do professional level desktop publishing from your home office. PostScript compatibility tends to be an either/or situation. Either you really need it, and are willing to pay the extra several hundred dollars that the licensed Adobe PostScript chips and extra printer RAM commands, or you don't need it at all. If you are using a PC and True Type fonts, then you can probably get along without PostScript. Although some of the laser printers in this survey do have PostScript compatible models or upgrade options, for a budget conscious average PC user, PostScript is generally not necessary.

Cost

You may pay less for an inkjet printer, but due to the fact that inkjet cartridges do not last nearly as long as a laser toner cartridge, you may end up paying more in consumable costs over the life of an inkjet printer than you would for a laser.

Consider that an inkjet cartridge may only print 225 pages of text. If you print that many pages each month, an inkjet could run you more than two or three hundred dollars extra per year. A laser printer's cartridge, on the other hand, may have a toner life of 2000 or 3000 pages and may cost you less than $100 per year. Even if you factor in the laser's drum life (which is usually well over 10 000 pages), the laser printer will still work out cheaper in the long run if you intend to print at any kind of volume. ➤



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Portability
Though laser printers are continually being packed into smaller footprints, laser technology still cannot match inkjets for compact size or low power consumption. If you need a printer to travel around with you and your notebook computer, the market only offers inkjet portable printers.

The Contenders
Here we are looking at printers that fall into the budget or home use category. We asked that all the printers have a street price of under $800, which eliminated most of the PostScript models. This sector of the printer market is extremely competitive: good quality laser printers offering 600 dpi can be had for the same kind of money that a 300 dpi unit would have cost you a year ago at this time. Inkjet printers also continue to be refined, offering better and faster color output. While for the most part inkjet printers are still cheaper than low end lasers, we are beginning to see some overlap in the pricing of the two types of printing media. If you wanted to spend $800 on an inkjet printer you could come away with a machine capable of printing color graphics at almost photographic quality.

The Tests
We used a Gateway 2000 Pentium 75 running Windows for Workgroups 3.11 with 8 MB of RAM and an Express Micro Pentium 90 running Windows 95 with 16 MB of RAM to throw print jobs at the printers. For printers that offered Macintosh connectivity we used LC 630's with 8 MB of RAM. We looked at print quality, print speed, paper handling, ease of installation, upgrade options and the price of the units. Without further ado, here they are:

Apple StyleWriter 2400

The setup of this printer was totally out of line with the easy streamlined hookup that one usually associates with Apple products. Shocking but true: the software setup of the StyleWriter 2400 was the worst of all the printers we received. In fact it was so bad that we had one of our resident Mac enthusiasts reinstall it to confirm its depravity. We concluded, to our amazement, that they must have sent us the wrong disks the first time

[illegible] offering [illegible] dpi [illegible] up to three [illegible] 720x360 dpi [illegible] speed quite [illegible] The printer has a [illegible] Watermark feature [illegible] be placed on the background [illegible] through ColorShare, the [illegible] can be shared by users on a LocalTalk, EtherTalk, or TokenTalk network. Optionally you could add the LocalTalk module for direct [illegible] LocalTalk [illegible] World Wide Web.

Brother HL-641, HL-645M HL-660, WL 660
We have looked at Brother's HL 641 and HL 660 printers in our last two printer surveys. Many printers that have been around for this

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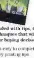

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HP Printers

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length of time are beginning to look a little long in the tooth. Not these two Brothers, however. They remain well priced, good quality printers.

The HL-641 is a 300 dpi printer with a six page per minute print speed. The printer comes with 512 KB of memory standard and uses intelligent memory management to allow the printer to get through complex print jobs. This printer has the lowest street price of any laser we looked at and is an excellent performer. It still holds its position at the front of the pack in terms of price/performance.

If you are a Mac user looking for a low cost laser printer, look no further than the HL 645M. This printer has the same features as the HL-641 with the addition of 512 KB of RAM bringing it to 1 MB, and a Macintosh interface. According to Brother, this is the cheapest laser printer that you can buy that will connect to both a Mac and a PC.

The HL-660 looks similar to its sibling, but offers 600 dpi at the same six page per minute print speed. The HL 660 also comes with 2 MB of standard memory upgradable to 10 MB and an optional postscript upgrade. If you are a Windows only user and want to save some money, you can purchase the WL-660 which is equivalent to the HL 660 but uses the Windows Printing System. Using this method of data exchange between computer and printer allows Brother to significantly cut down the amount of RAM that the printer needs and thus pass the savings on to the consumer.

Be forewarned that this printer, like other printers that use the Windows Printing System, will not print from DOS applications.

Brother's laser printer line is a definite must see for anyone who is looking for a SOHO laser printer. At the time of this writing, the Brother Web site is under construction; visit them at www.brother.co.jp

➤

A Note About Drivers

Most of the printers in this survey come with drivers for Windows 3.1x and Windows 95. Those that do not have support for Windows 95 bundled with them come with instructions as to how to obtain a Windows 95 driver when it is ready. By the time that this edition of TCP hits the street, it is a safe bet that all printers for the PC platform will come bundled with drivers for Windows 95. However, if you do intend to use the printer with Windows 95 or some other operating system such as OS/2, Mac O/S, or Windows NT, you may want to save yourself the possibility of disappointment by checking that the drivers you require are indeed in the box.

Lexmark on Inks Chemistry

Ink is of the utmost importance when it comes to color inkjet printing. In order to provide the high print quality Lexmark has developed a number of their own proprietary inks. Here's what Lexmark informs us are the important factors to consider in the creation of a good ink.

Ink Drop Velocity and Spread Factor

The optimum velocity should be 350 to 500 inches per second. Low velocity leads to misplacement of the droplet on the paper while a high velocity leads to extraneous droplets and splatter. The mass and spread factor of an ink drop determine the size of the printed dot known as spot size. The desired spot size for 300 dpi resolution output is 120 micrometers or about 4.7 thousandths of an inch. The spread factor — which is a measure of how large a spot is — is determined by the surface tension of the ink and the surface energy of the paper.

Surface Tension, Viscosity and pH

These three factors play an important role in print quality. Surface tension of the ink influences the optical density of the ink droplet, which affects the print quality. Ink surface tension and viscosity influence the ink droplet spot size when the droplet hits the paper. The pH of an ink determines its solubility. This affects the water resistance of a printed page.

Lightfastness and Color Gamut

Color gamut is the range of colors that a given set of inks can produce. This is determined by the dyes that are used in the inks. Dyes that have a wide color gamut are often sensitive to light, which means the images they produce may fade when subjected to light. The measure of an ink's resistance to fading when exposed to light is known as *lightfastness*.

Even though many inkjet printers work by the same principle and offer similar resolutions, they can still differ in print quality. This, according to Lexmark, is because it is not merely dot resolution that determines print quality, but more where and how the printer places the dots. You can bet that Lexmark and many of their competitors will be hard at work for many years to come perfecting and tweaking inks, the age old runny stuff that most of us rarely give any thought to. ❑

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Canon BJC 4000

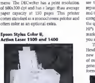
When one talks about a contraption that throws ink at a page it is usually referred to as an inkjet. However, when you are discussing a Canon product that performs this feat, the correct terminology is bubble jet. This is because Canon actually pioneered the technology and holds a patent on it.

There is not a niche in the SOHO bubble jet market that Canon does not have a printer to fill. In fact, Canon has no less than eight bubble jet models in stores today, not including discontinued models. The bubble jet we received for review was the BJC-4000. This printer can print black text with the BC-20 black cartridge at a healthy 720x360 dpi at up to five pages per minute and color graphics using the BC-21 cartridge at 360 dpi. One of the cheapest printers that we received for review, the BJC 4000 is a well priced performer and is definitely worth considering. Canon's Web page is located at www.usa.canon.com.

DEC Writer 500i

This inkjet has been on the market for quite some time now. Despite this, it still remains one of the most stylish looking models available. In an era when manufacturers are taking a minimalist approach to control buttons on the printer and centralizing control on the desktop, Digital's inkjet still houses a rich menu. The DECwriter has a print resolution of 600x300 dpi and has a larger than average paper capacity at 150 pages. This printer comes standard as a monochrome printer and offers color as an optional extra.

Epson Stylus Color II, Action Laser 1100 and 1400



Looking for high resolution color printing? Epson's Stylus Color II is the printer for you. This printer produces crisp photo-like output at 720x720 dpi. The only downside to this is the need to use a special coated paper when printing at high resolutions. The color prints we received from the stylus got several members of the staff more than a little excited. The printer has both Mac and PC interfaces and can work on both platforms simultaneously. This is a good choice for either a Mac or PC user, especially if you need to output the occasional extremely high quality color document. The best part is, you get all of this for a price far less than other color printers that can give you comparative resolutions.

The two laser printers that Epson offers are both competitive in their respective classes. The Action Laser 1100 is a 300 dpi, four page per minute printer with 1 MB standard memory. The output from the 1100 is about what you would expect from a 300 dpi laser printer — perfect for text but less than ideal for graphics with a lot of detail. The Action Laser 1400 offers better resolution at 600 dpi, a six page per minute print speed and slightly more standard memory at 2 MB. The output from the 1400 is quite clean and well defined but not quite the best in its class. These two lasers can handle PostScript level II documents through the option of software emulation. See Epson's products for yourself at www.epson.com.

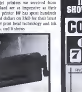
Hewlett Packard Laserjet 5L, Deskjet 340, 660C and 850C

The HP LaserJet 5L, first mentioned in the December issue of *The Computer Paper*, offers stellar performance at a good price. The 5L is Hewlett Packard's first real attempt at capturing a portion of the low-end budget printer market.

The 5L offers 600 dpi printing at four pages per minute. In testing, the 5L spat out a test page of graphics and text in a little under 30 seconds. The same page took over 1 minute 20 seconds on several comparable printers.

The output from the 5L was equally impressive. You didn't need a trained eye to see that the 5L printed the most accurate reproduction of grayscale photos, graphics and text. Banding on the output was minor in comparison with the competition. In short, the quality and performance of the 5L reflects HP's long standing experience in the printer market. Make sure you give it consideration if you are in the market for a new personal laser.

The inkjet printers we received from Hewlett Packard are as impressive as their new 5L laser printer. HP has spent hundreds of millions of dollars on R&D for their latest generation of print head technology and ink formulations, and it shows



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BUDGET PRINTER SURVEYS

LASER PRINTER SURVEY

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Processor	MC68000	MC68000	68HC000 16 MHz	68000hal/16	68030 24 MHz	i960
Resolution (dpi)	300 dpi	600 dpi	300 dpi	600 dpi	600 dpi	600 dpi
Enhancement	APT	APT				SET
Speed (ppm)	6 ppm	6 ppm	4 ppm	4 ppm	4 ppm	6 ppm
Ram MB Std	512K	2 MB	1 MB	2 MB	1 MB	1 MB
Ram MB (Max)	2MB	10 MB SIMM	5 MB SIMM	18 MB SIMM	8 MB	4.5 MB
Connectors	Hi Speed Par RS232C (opt) Mac (opt)	Hi Speed Par RS232C (opt) Mac (opt)	Parallel	Parallel	Parallel	Parallel
PCL	yes	yes	yes	PCL 5	PCL 6	PCL 5e
Postscript	no	optional	optional	optional	no	optional
Other	3 emulations	3 emulations				GDI Mode
Paper Cap'y Standard #	200	200	100	100	100	200
Paper Cap'y Max #	200	200	100	100	100	200
Max Size	Legal	Legal	Legal	Legal	Legal	Legal
Fonts	45 24 bitmap	61 12 bitmap 21 scalable	22 14 Scalable 49 scalable	45 45 Scalable 8 bitmap	26 Scalable	45 45 Scalable 1 Bitmap
Cartridge Life	3000-6000 pgs	2000-6000 pgs	4000 pgs	4000 pgs	2500 pgs	4000 pgs
Drum Life	17000 pgs	17000 pgs	N/A	N/A		
Warranty	2 years	2 years+	2 years	2 years	1 year	2 years
Toll Free Support	yes	yes	yes	yes	no	yes
Price	$679	$760	$600	$749	$725	$860
Contact	514 685-0600	514-685-6601	800-463 7766	800-463-7766	800-527-0800	905-795-3524

*All prices are Canadian street prices unless otherwise noted

**Estimated Retail Price

INKJET SURVEY

	Apple Stylewriter 2400	Canon BJC 4000	DEC SilentWriter 5001	Epson Stylus Color II	HP DeskJet 340
Interface	RS 422	Par	Par	Par RS 422	Par Ser IrDA
Resolution Text	720 x 360 dpi	720 x 360 dpi	600 x 300 dpi	720 x 720	600 x 300 dpi
Resolution Graphics	360 x 360 dpi	360 x 360 dpi		720 x 720	300 x 300 dpi
Speed Text	up to 5 ppm	HQ 248 cps	LQ 160 cps	up to 4 ppm	2 ppm
Speed Graphics	0.33 ppm	0.3-0.8 ppm		1 ppm (360 dpi)	4-7 mpp
Paper Cap'y	100 Sheets	100 Sheets	150 Sheets	100 Sheets	30 or 60 sheets*
Fonts	True Type Support		5 Built in		4 built in
Cartridge Life Expectancy					
Black # Pages	225	225	n/a	620	
At % coverage	5%	5%	n/a	5%	n/a
Color # Pages	100	100	n/a	300	n/a
At % coverage	7.5%	7.5%	n/a	15%	n/a
Warranty	1 year	2 years	2 years	2 year	1 year
Street Price	$650	$450	$437.85	$800	$450
Contact	800-665-2775	800-668-4123	800 Digital	800-463-7766	800-527-0800

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	Okidata OL 600e	Panasonic KX-P6100	Panasonic KX-P6500	Raven LS-3	Raven LS-6	Sharp 9210
Processor	Mips 4600 16 MHz	CPU	CPU			
Resolution (dpi)	600 dpi	600 dpi class	1200 dpi class	600 dpi (class)	1200 dpi (class)	600 dpi
Enhancement	yes	yes	yes	yes	yes	no
Speed (ppm)	6 ppm	6 ppm	6 ppm	6 ppm	6 ppm	6 ppm
Ram, MB Std	N/A	N/A	N/A	N/A	512 KB	
Ram, MB (Max)	5.5 MB	5.5 MB	512 KB			
Connectors	Parallel RS232C Serial	Parallel	Parallel	Parallel	Parallel	
PCL	yes	yes	PCL4.5	yes	PCL4.5	PCL 4
Postscript	no	no	no	no	no	no
Other		GDI mode	GDI mode	GDI mode	GDI mode	WPS
Paper Cap'y Standard #	100	100	100	100	100	100
Paper Cap'y Max. #	450	100	100	100	100	100
Max Size	Legal	Legal	Legal	Legal	Legal	Legal
Fonts	4 4 Bitmap 3 Symbol sets	7		7		34 Bitmaps
Cartridge Life	2000 pgs	2000 pgs	2000 pgs	2000 pgs	2000 pgs	2000 pgs
Drum Life	20000 pgs	15000 pgs	15000 pgs	15000 pgs	15000 pgs	20000 pgs
Warranty	1 year	1 year	1 year	1 year	1 year	1 year
Toll Free Support	yes	yes	yes			yes
Price			$639	$590	$790	885
Contact	905-602-6400	800-742-8086	800-742-8086	905 273 4453	905-273-4453	800-56 SHARP

	HP Deskjet 660C	HP Deskjet 850C	Lexmark JetPrinter 1020	[illegible]
Interface	Par	Par, RS-422 [illegible]	Par	Par
Resolution Text	600 x 300 dpi	600 x 600 dpi	600 x 300	600 x 300
Resolution Graphics	300 x 300 dpi	300 x 300 dpi	600 x 300	600 x 300
Speed Text	134 cps	up to 4 ppm	up to 2 ppm	2.5 ppm
Speed Graphics	3 mpp	1 mpp	2-4 mpp	3 mpp
Paper Cap'y	100 Sheets	150 Sheets	100 Sheets	150 Sheets
Fonts	4 built in	7 built in	uses PC fonts	
Cartridge Life Expectancy				
Black # Pages	n/a	n/a	1000	n/a
At % coverage	n/a	n/a	typical	n/a
Color # Pages	n/a	n/a	200	n/a
At % coverage	n/a	n/a	typical	n/a
Warranty	3 year	1 year	2 year	2 year
Street Price	$580	$720	$359**	$520
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Acer Pentium "Triton Pipeline-burst" 256K $320

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Hot off the SOHO Press

Continued from page **43**

The HP DeskJet 340 is a compact and light weight portable printer capable of wireless (infrared) printing. The infrared port on the 340 is not built in. Rather it uses an optional IrDA compliant attachment that plugs into the parallel port

With everything that you need to print on the road included — battery IrDA port, ink cartridge and portable sheet feeder — the printer weighs in at just under 6 pounds, about the same weight as an average notebook

This printer can manage a respectable two pages per minute printing text at 600x300 It uses a single cartridge design so you need to change cartridges in order to print color Color output was almost on par with the other inkjets from HP which were excellent For printing on the road the DeskJet 340 is a tough act to beat

The best output we managed to get out of a regular inkjet printer came from the HP 660C This was closely followed by the output from the HP 850C We were actually quite surprised at the difference between the two printers The 660C definitely produced richer colors than the 850C while the latter seemed to preserve a little more of the detail. Both printers offer 600x600 dpi when printing text and 300 dpi printing graphics

The HP 850C offers Mac connectivity through either RS-422 or AppleTalk and faster output than the 660C. The 850C comes with 1 MB of RAM and 2 MB of ROM compared to the 660C's 512 KB It also offers 150 sheet paper capacity to the 660C's 100 sheets. Both printers perform excellently in their respective niches The 660C is aimed more towards the home PC market and the 850C is a little more industrial strength with its quicker output and ability to handle Macs

We were elated when we opened the HP 660C box and found a slim book entitled Creating Colorful Documents Not only does HP deliver a wonderful product they are also thoughtful enough to provide some direction as to how to use the power of color most creatively and effectively While this book is hardly a comprehensive guide to the use of color in your documents if you are as artistically challenged as I then any competent advice on what to do with the capability to print in color is welcome

Explore all of Hewlett Packard's products extensively at www.hp.com

Lexmark Color Jetprinter 1020

Lexmark's vision of the home market printer lies firmly with inkjet technology As such they have withdrawn somewhat from the low cost laser printer market

Lexmark puts a lot of thought into the aesthetics of their printers Indeed, Lexmark's style is evident throughout their entire line of products from their personal inkjets to their network laser printers Announced November 2 1995 the color Jetprinter 1020 that we received for this review offers print resolutions of 600x300 dpi in both black and color

The Jetprinter also comes with the added value of a CorelDraw Version 3 CD-ROM This printer holds only one cartridge at a time, so when printing in color the printer mixes cyan magenta and yellow to produce a composite black. This was a real stumbling block on our test prints as the black portions of mixed text and graphics don't have the same quality of other printers that use both color and black print cartridges simultaneously Still if you are using the printer for textual output you can always switch to a black cartridge to obtain pure black output

On the other hand, if this is a concern you can pay a little extra and buy Lexmark's Jetprinter 2070 which does use both black and color print cartridges

See Lexmark on the Internet via www.lexmark.com or Go Lexmark on Compuserve

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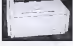
an optional upgrade that enables it to add spot color to documents. The SuperScript is a capable SOHO printer producing output at 600 dpi with a print speed of six pages per minute.

The printer utilizes the Windows native printing environment GDI which allows it to use the computer's processing power to rasterize the printed output. This means that the printer's performance is increased by adding RAM or upgrading the CPU of your computer. The disadvantage to GDI printers is that they require that your computer take on some additional overhead during printing. Still the NEC gave reasonably sharp output. An animated print monitor that allows full control and status reporting from Windows is also nice. The SuperScript is a desirable printer to have at home. If you need the speed of a laser plus occasional spot color, it's a good choice.

Okidata OL-600e and OL 610e



Okidata has recently phased out its successful and long running OL-400 series of LED printers. They have been replaced by the improved OL-600e and OL-610e. These new printers are similar in appearance to the 400 series predecessors although the control panel no longer exists on the printer and has been moved instead onto the Windows desktop via the print driver. The 600e series of printers also offers 600 dpi output through resolution enhancement an improved six pages per minute RISC print engine and 1 MB of standard memory.

The grayscale rendition of our photograph test print was a little dark in places but text and line art were superb. If this printer reaches anywhere near the price point of the OL 400 series printers that they replace Okidata could be on to yet another winner.

At the time of this writing, the Windows 95 driver for this printer was still under development but should be available with the system by the time you read this.

Okidata also offers an interesting inkjet printer — the Okidata Okijet 2010. This unit is capable of resolutions of up to 600x300 dpi on both text and graphics and offers solid output.

The interesting aspect of the 2010 is its print driver, which talks in a close-to natural human voice informing you of the state of the printer. It even works through the standard PC speaker. We thought this was cute but didn't have to put up with it for an extended period of time. Potentially this could get quite annoying. You can learn more about Okidata's line of printers from www.okidata.com

Panasonic KX-6500

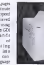
Does six page per-minute 1200 dpi output sound attractive? That's just what the KX-6500 printer from Panasonic offers. Panasonic has used both photo enhancement and edge enhancement technology to improve the output of this native 600 dpi machine to give output that is in the 1200 dpi class.

The six pages per minute printing speed is achieved through using Windows GDI commands instead of translating them into printer control language (PCL) before sending them to the printer. The net result of this is a decrease in the throughput speed (the time from when the computer key is pressed until the last sheet is printed). The KX-6500 comes with all the standard environmentally friendly features like power save mode and toner saver. It also has a waste toner recycling feature which, according to Panasonic, eliminates the need to throw away toner waste products that are potentially harmful to the environment. Panasonic also offers the KX-6100, which is very similar to the KX-6500. The difference is the lower 600 dpi-class resolution of the KX 6100. Both printers are fine performers in a very small mini tower package.

Panasonic's Home page is www.panasonic.com

Raven LS 3 and LS-6

We talked about these two printers from ServiceWorks in the September issue of *The Computer Paper*. They still remain a good solution for affordable home printing. They offer good value and decent output in one of the smallest footprints available. The LS-3 is a 600 dpi-class six pages per minute printer, while the LS-6 is a 1200-dpi class six pages per minute printer. These printers achieve their higher print resolutions through the use of resolution enhancement technology. Again these printers use the Windows GDI to achieve their high print speeds. Like the aforementioned Panasonic printers, these two are definite contenders for your laser printing dollars.



Sharp JX 9210

Sharp has recently introduced two new super compact laser printers the JX 9200 and the JX-9210. These printers offer one of the smallest footprints we have yet seen in laser printers. We received the JX 9210 which is a 600 dpi four page per minute printer and the 9200, which is the same with the exception of its 300 dpi output. The printers use the

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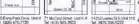

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Microsoft At Work Printing System which, according to Sharp, Microsoft will be investing significant amounts of money to promote over the coming year.

The real advantage of this type of printing system is that, as Sharp puts it, "The RAM which ships with the JX-9200 or the JX 9210 is all of the memory which these printers will require. If a file can be accessed by your PC, the JX 9200 and JX 9210 can print it." The output from the JX 9210 was not among the best for 600 dpi output. It had some visible hatching and banding on graphic output. Still, it was acceptable.

Editor's Choice On the laser side of the equation, there is one clear winner in terms of speed and output quality. This is the HP 5L. This little number printed test documents faster than many printers with higher rated print speeds. I had this printer at home for a while about a month ago and must admit that I was a little skeptical of HP's claim that this four pages per minute printer is faster than a lot of printers that are rated at six pages per minute. Now after seeing it perform along side other printers, I'm a believer. The output from the 5L is also head and shoulders above the competition, especially with photographs. HP has finally taken dead aim at the SOHO personal laser printer market, and with the 5L has set a standard that all the other manufacturers will now have to scramble to meet.

For a low cost, low resolution laser printer, the budget-conscious choice is again the Brother HL-641, with the Epson action laser a close contender. If you just want to pick up a printer for reports and other textual output, and you want to spend absolutely bottom dollar, the HL-641 is the most for the least.

On the inkjet side of the equation, the output and performance is a little harder to judge. Without a doubt, the Epson Stylus II offers the greatest looking color output you can buy for under $800. Epson calls the output "photograph quality" and this is no overstatement. In fact, the sample output we obtained from the Stylus has better color than most of the pictures that I get back from the film lab, but then again photography is not my thing.

There are a couple of things you should keep in mind if you are thinking of purchasing this printer: 1) To get the most fabulous quality output at 720x720 you need to use special paper above and beyond regular coated inkjet paper. 2) At regular 360 dpi resolution on normal bond paper this was not the best performing inkjet printer. Be prepared to experiment a bit to find inexpensive coated paper stock to get decent output at a lower cost.

The inkjet that offered the best color and clarity on regular paper at normal resolutions was the HP 660C. The color on our graphic output was more vivid than any from the competition. At over $500 dollars on the street you could easily find a color printer for less money, but a printer is a long term investment, so why skimp? ❑

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My Legal Assistant Does Business

BY TREVOR HORSLEY

(NB) — MLA Systems Inc in Ottawa has launched a Canadian Business Edition of its My Legal Assistant legal software package The application prompts the user to "fill in the blanks" and then automatically generates any of several dozen different commonly used business forms and letters

MLA Systems bills the product as "legal software made for Canadians by Canadians." That's more than just a nationalistic exclamation It's intended to help users differentiate this all-Canadian product from the many retail and shareware "legal documents" packages which originate in the US and are often based on US law MLA also notes that the documents it produces have been "developed and tested for legal use in Canadian provinces and territories" but are not valid in Quebec where the civil statutes are based on a different legal code

The program's manual states that the program is intended to be used in relatively simple circumstances, where the parameters of the transaction fit within the provisions of the software The program can be used to help familiarize the user with a particular matter so they will be better informed when they retain a lawyer Also MLA says the documents can be used as a stop-gap until you can retain a lawyer

However as the boot-up warning in the first screen of the program carefully cautions "Remember No software no text book and no self-help manual can replace the training and experience of a lawyer who practices the particular area of law

MLA Canadian Business Edition a Windows 3 x/95-compatible package, ships on two 1 44 MB diskettes and comes with a 40-page manual which concentrates on walking the user through the creation of more than 50 different documents including real estate offers options and releases, business asset and share purchase agreements partnership agreements, commercial lease documents, sales contracts employment contracts and confidentiality agreements powers of attorney warranties and trust declarations

The package also includes a handy glossary of legal terms and a proprietary word processor which can be used to customize and print the standard documents generated by the program You can save your raw data (answers to the "fill in the blanks" exercise) separately from the documents you generate so that both documents and "answer" files can be edited or updated separately as required.

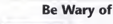
The Business Edition is a companion package to the Canadian Personal Edition released last year which uses a similar approach to generate bills of sale promissory notes residential leases, loan schedules, powers of attorney wills and domestic agreements for personal and family use

The Canadian Personal Edition sells for $39 95 The Business Edition is expected to carry a street price of $99 Both packages are available now, at major software retailers across Canada

To run either of the packages MLA Systems recommends a PC running Windows 3 1 or later, 4MB or more of RAM a VGA or better display 3MB of hard drive space and a mouse ❑

Contact MLA 613-834-5184

Be Wary of Risky Businesses



Have you ever been tempted to buy a business? About 25 percent of the population has entered the wild and woolly world of entrepreneurship through that door Maybe you are wanting to get into an established business for the first time Possibly you want to expand or diversify your existing business by buying another

Whatever your motivation when searching for a business, there are a number of classic warning signs that should alert you to potential problems Buying the wrong business could result in a financial disaster for you The following is a partial list of common warning signs that you should be aware of

What Exactly Do You Do?

It would be a serious mistake for any buyer to invest in a business that the buyer knows nothing about The dangers in running the enterprise are accentuated by inexperience and unfamiliarity If you are the potential buyer you could be buying a business totally unsuited to your personality talents or interest You would be at a considerable disadvantage in trying to survive and compete with your competitors

Partner Wanted

Some business partnerships that are based on sound economic data can work out well and may be worthy of your consideration On the other hand many business partnerships do not survive in the long run. This could be because of conflicts of personality philosophy, policy priorities or contribution of money time, or skill into the business Some unstable and undesirable business operations attempt to defraud the unwary investor by obtaining an injection of funds into the business and then using those funds in an inappropriate fashion without any controls For example investment funds could be used for paying past creditors debts rather than for working capital for future need and growth. Be cautious of any business partnerships that promise a disproportionate return based on the investment of money or time.

Every Nickel Tied Up

If you are considering a business which would require all of your financial resources to pay the purchase price you could be in a situation that you are starting off undercapitalized without working capital or reserve for future needs For example If you take over a business and there is a decline in sales and profit during the transition phase you would not have any resources to be able to buffer the financial crunch. Never buy a business without taking into account your working capital and contingency fund

Let's Get Personal

There are special concerns you should be aware of if you are considering buying a personal service business (for example an architectural engineering, law dental or legal practice) The main concern relates to the bonding and goodwill which has occurred on a one-to-one relationship between client and the professional. Once the business is purchased, a substantial portion or possibly most of the clientele could leave and go to other professionals because of a difference in style and operation If you do buy a personal service business you should build in protections because of the high risk that the good will may not necessarily stay when the other party leaves

Wolves At The Door

Don't proceed any further if you are considering a business which is going through serious financial problems The exception would be if you are an expert in that type of business have clearly identified the reasons for the financial difficulties and know that you have the expertise and management resources to turn it around. There are people who buy businesses with a turnaround strategy in mind and skillfully negotiate a purchase package which is very attractive This can be done effectively of course only if the buyer knows what he/she is doing and is sophisticated in this type of distress purchase

Remember before you decide on any business, check it out thoroughly Ask lots of questions, comparison shop be objective not emotional and speak to others in the industry Finally get professional analysis, feedback and advice from a street smart accountant and business lawyer. ❑

Douglas Gray, *LL.B., is a Vancouver based speaker lawyer columnist and author of 15 business books plus a real estate investment software program His books include Home Inc., The Canadian Home-Based Business Guide and The Complete Canadian Small Business Guide (both by McGraw-Hill Ryerson), Start and Run a Profitable Consulting Business and Marketing Your Product (both by Self-Counsel Press)*

Rogers Cable Offers Commercial Internet Access

BY GRANT BUCKLER

NB — Rogers Cablesystems Ltd., has begun offering access to the Internet and other online services over its cable network. Newmarket, a suburban community north of Toronto and the site of an earlier technical trial will be the first to get the service on a commercial basis

In its trial stage the service was called CableLink Home, but Rogers has renamed it Rogers Wave It uses a 500 000 bits per second cable modem, offering a major speed advantage over telephone-line modems

In answer to the question TV addicts may be asking, Rudy Engel, executive vice-president of sales, marketing, and programming at Rogers Cablesystems, told Newsbytes it will be possible to watch Television while using Rogers Wave on the same cable connection The cable modem uses frequencies not used for TV signals, he explained

Rogers will provide its own package of Internet access software, including a World Wide Web browser and other utilities However Engel told Newsbytes that any software designed for use with the Internet will work over Rogers Wave, as long as one software component designed to manage the cable modem is present.

Rogers chose Newmarket for the service's launch because its cable system there is fully duplexed, allowing two-way communication between subscribers and the cable company Rogers is in the process of upgrading its other cable installations, Engel said, and hopes to offer Rogers Wave throughout Metropolitan Toronto by this time next year Other cities served by the company, including Vancouver, Ottawa, and various smaller centers in southwestern Ontario, will follow

Rogers will charge $39 95 per month for unlimited Internet access plus some special services At an additional cost, the company will also provide cable-modem access to commercial online services such as Compuserve and America Online Engel said agreements with the major commercial online services are close to completion Customers would purchase subscriptions from the online services in the usual way but connect via Rogers Wave rather than over a phone line, he said ❑

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A Buyers' Guide To Handheld Technology

BY JEFF EVANS

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- Symbol PPT 4600
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- Texas Micro Grunt II (The Soldier's Computer)
- Vital Technology TR-107 Tricorder Mark I

What Is A Handheld?

The notebook computer and the handheld electronic organizer have merged somewhat due to the development of a wide range of handheld computers. Many use pen input and they often have a built-in hard drive and a version of a "real" PC operating system (usually MS DOS or Windows For Pen 1.0).

We are looking at some of these hybrid devices in this survey, because while still being much more portable than a full sized notebook (they generally weigh about two pounds) they have full 386 or 486 PC power. They are also often quite expensive — in the $1,500 to $4,000 range — but justify that cost by being highly rugged, connectable and ideally suited to niche applications such as law enforcement, traffic data entry, and other serious business uses.

In many respects these handheld computers foreshadow the power and connectivity options of the next generation of "wallet PCs" foreseen by Microsoft's Bill Gates. What all these devices have in common is what the name implies: they are laid out so the user can operate them standing up, holding the unit with one hand while operating a pen or keyboard with the other.

Is That A PDA In Your Pocket, Or Are You Just Glad To Be Mobile?

By the early 90s, the handheld information device category included models at the high end of its range that were almost as sophisticated as a PC, with a real operating system, a powerful main processor, over half a megabyte of RAM, and many desktop or notebook PC-style capabilities. In order to compete in the computing environment of the 90s, the organizer had to evolve into something more ambitious and powerful, not just an electronic notepad and calendar but a personal digital assistant: a tiny information tool whose built-in software actively tried to make the user's life simpler.

Where's The Phone?

At the high end of the business-oriented handheld market there is a demand by users for both voice and data telecom links. There have been several factors holding back widespread availability of wireless connection options for handheld devices: cost, reliable technology and local availability of wireless data services that you can use to carry your wireless data. Handheld devices with built-in wireless modems or cel phones are available, but they are so expensive ($2500-$3500) and complex that they have tended not to find a wide market.

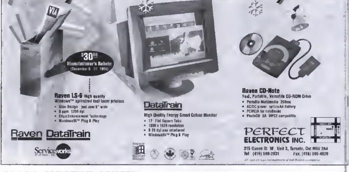
Orphan Tech

One of the major problems with handhelds is that there's much less of a standard for anything — operating system, connectivity options, file formats, software, graphics — than there is in the mainstream PC world. You can easily invest in an information device that will be discontinued and unsupported a few months or years after you buy it. This possible lack of a handheld device's future is not necessarily critical if you are merely buying a $200 personal organizer, but if you are buying a $1,000 top-of-the-line PDA, it is a major irritant. If you are outfitting your company with dozens or hundreds of handheld computers for a mission critical job, a wrong bet could be a career buster. At least if you go with a brand name with a long track record like HP, Sharp, Casio or Psion, you have some reason to hope that the manufacturer is likely to still be around in a few years.

Cottage Industries

Most handhelds come with a basic feature set of memory and software. More often than not, some very desirable features — like a larg

Continued on page 54



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Handheld Technology

*Continued from page **52***

er keyboard, a modem, or cables for file transfer to and from a PC — are optional.

One of the interesting aspects of handhelds is that they tend to grow their own little worlds of third party products around them if they have any success. Hewlett Packard's products in particular, with an installed base in the millions, have many dozens of third party products ranging from carrying cases to modems to memory expansion units to plug in software modules. Most good retailers can direct you to suppliers of optional products that you may want.

What's Out There

Here is a roundup of some of the most widely used handheld information devices, plus some of the most intriguing, unusual or leading edge variations on the theme.

Apple Newton MessagePad 120 with Newton 2.0 operating system

The MessagePad 120 is the state-of-the-art Personal Digital Assistant. It comes with a host of built in software including calendar, notepad, handwriting recognition, maps, calculator, Pocket Quicken and other utilities. It has an infrared port for communicating data with other compatible devices (unfortunately not IrDA compatible in the current model), a PCMCIA card slot, and with an optional Print Pack, can print from parallel or serial printers.

The Newton 2.0 operating system features considerably improved handwriting recognition compared to the original release and has a little touch-keypad option that can appear on the screen for entering text without going via the handwriting recognition. Users of the message pad, to make use of the potential of the product, really may feel the need to buy several additional products: a keyboard for typing in text, a modem, and printer adapters. Nonetheless, for all its initial glitches, this is the most technically impressive and advanced handheld info tool in the world, and the Newton 2.0 operating system deserved its Best of Comdex honors from *Byte Magazine* at this year's Fall Comdex show in Las Vegas. For more information, contact Apple Canada 905-477-5800.

Casio PDA Z 7000, NX4000

Casio was one of the first companies to develop electronic calculators. In their current Canadian catalog they have around 50 models, more than any other manufacturer. In addition to handhelds they make numerous electronic toys, ranging from music keyboards to digital and data watches, and a terrific line of digital cameras with a built in liquid crystal display.

The PDA Z-7000 is a pen based personal digital assistant that gives good performance at a relatively low price. It has a PCMCIA slot to accommodate a modem. The software suite that comes with the Z-7000 is vast, including a dictionary and thesaurus, America Online telecom software, a 26 language translator, password protection, and games. The Z-7000 has tended to be overlooked next to the Apple Message Pad, Sharp Zaurus and HP 200LX.

*Continued on page **56***

The Great Experiment

About two years ago Apple rolled out the Newton, a Personal Digital Assistant platform that it hoped would be the ultimate in handheld technology. Not just an organizer, the Newton combined a RISC processor boasting desktop PC power with an operating system that contained very impressive artificial intelligence-style features that aimed to adapt an individual Newton to an individual user's personal habits and needs. As well, the Newton aimed to use touch input and handwriting recognition software to allow the user to write and sketch into the device, in literally the same way people had used pen and paper for centuries.

Although the Newton has not yet met Apple's initial expectations in terms of sales, and a lot of users (and journalists) felt that it did not live up to the extreme hype surrounding its release, it hasn't done as badly as some of the critics (particularly *Doonesbury* cartoonist Garry Trudeau) have indicated.

In addition to the Newton, a wide range of other pen computing devices have entered the market in recent years. Often running Microsoft Windows for Pen, a variant of MS Windows, pen computers range from Newton like handheld tablets to full sized notebook computers with a pen or touch entry option.

The Future Of Newton

Apple is aggressively continuing development of new handheld devices, some of which will likely be marketed in the years ahead. Apple's Advanced Technology Group recently showed a design for an integrated personal communicator at the Computer Human Interface 95 show in Denver. The proposed device would allow e mail, phone and fax operations using a drag-and drop graphic user interface.

A next-generation Apple PDA, code named Que, is due in early 1996. It is claimed that it'll have a real keyboard like the Psion, as well as pen input, and a standard, IrDA (Infrared Data Association standard) infrared comm. port. ❑

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LP1930 10PPM LASER 1M	$1 375
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BJ-30	$349
BJ-100	$275
BJ-230	$479
BJC 70	$499
BJC-210	$389

Handheld Technology

Continued from page ***54***

but it is a worthy contender

The Casio NX4000 is a pen-based color digital diary a kind of entry level pen system with a good feature set of organizer software and a nice color screen For more information contact Casio Canada Ltd 416-431-3747

Compulys/Psion 3a

The Psion 3a distributed in Canada by Compulys is one of the most flexible and usable handheld computers Although it is based on an older XT-era processor it has marvelously fast performance a complete elegant suite of built in software and simple to use connectivity add-ons for file transfer with PCs and telecommunications. There is a huge worldwide user base for the Psion, and a wide range of third party and custom business applications (such as bar code reading and database) When I evaluated the most current model the 3a it performed flawlessly Along with HP and Sharp Psion is one of the top quality brand names in the handheld business For more information, contact Compulys at 1-800-361-0605

Epson EHT 301 and EHT 40

These new models of Epson's touch screen handheld computers combine transaction processing capability with remote data access The EHT 301 has a 286 level processor 512K of RAM and one PCMCIA slot and weighs a little over a pound. The EHT-40 has a 386SX/25 processor, 4 MB RAM runs MS-DOS or Windows software has one PCMCIA slot and weighs about 20 ounces Both have signature capture ability For more information contact Epson Canada, 416-498-9955 or Epson America, 310-782 0770 On the Internet, try www.epson.com

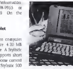
Fujitsu Stylistic 500 pen tablet (Filbitron Marketing Corp)

This is a popular 486 based pen computer tablet with PC level performance 4 20 MB RAM and an internal hard drive A Stylistic RF (Radio Frequency) model supports short range wireless communication Some current Canadian corporate users of the Stylistic 500

include the *Globe and Mail*, SmithKline Beecham and Best Foods For more information contact Filbitron a Canadian system integrator that sells Stylistic 500 solutions for Field Sales Forces at 905 477-0450

Hewlett Packard HP 100LX HP 200LX, and OmniGo 100

The HP 100LX and HP 200LX are intended as companions for a desktop PC They offer powerful built in software and cellular and two-way paging connections between the user and a remote PC for messaging, e-mail and access to online services The HP 200LX in particular is popular in industries where



easy and reliable data communication between a handheld and a PC is essential

The HP OmniGo is an extremely compact light but full featured and powerful handheld organizer with built in contact management, scheduling and financial analysis software as well as both pen/handwriting recognition and keyboard input. The screen image can be rotated to give either horizontal or vertical orientation. Included software allows for tracking daily appointments and expenses notetaking, and address and phone books The OmniGo's operating system is GEOS from Geoworks a very good graphic user interface Optional connectivity kits allow file transfer with PCs All the HP handhelds we evaluated were a pleasure to use For more information, contact HP Canada at 905-206-4383.

Norand Pen*Key 6100

This is a pen-based handheld computer running Windows, weighing 22 ounces and featuring a touch input surface, up to 8 MB RAM and two PCMCIA card slots for devices such as modems The system uses an AMD ELAN Am386*SC300 processor for PC level performance has a long life lithium ion battery

IrDA infrared communications port and an optional integrated bar code reader Other Norand models include a highly compact, 386 based Pen*Key 6200 the Pen*Key 6300 and a four-pound Pen*Key 6600 For more information contact 1-800-4 PENKEY 319-369-3488 or via e-mail at weryc@norand com

Panasonic DataPartners and JT 9000PT

Panasonic has a line of MS DOS-based Data Partner handhelds (including the JT-762, the JT 785 and the JT-890) which are lightweight calculator-style devices designed for business data applications. The JT-9000PT is a 1 9 pound 486SX 33 based pen computer with 8MB RAM, 130 MB hard drive and 1 PCMCIA slot It has been available in Japan for some time and is expected to be released in North America by the end of 1995 It is based on a 486SX/33 processor and has a VGA (640x480 pixel) 6 3-inch screen and an internal hard drive For more information contact Robert Kwong Panasonic/Matsushita Electric of Canada, Ltd. 905-238-2254 905-624-5010, or 708-468-4906

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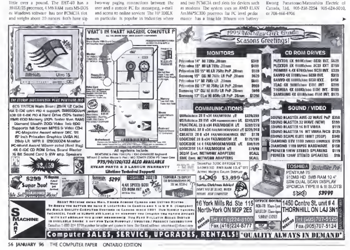

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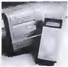

This company makes a range of handheld and portable data collection and printer devices designed for harsh outdoor or industrial conditions including submersion in water and extreme temperatures. If you see the officer placing a ticket on the windshield of your car using a handheld computer to record and print out a record of the infraction, you'll be pleased to know there's a good chance that the gadget he or she is using is a Radix LMS (Law Management System). For more information, contact 905-673-7222, or 800-328-3401.

Parrot Speech Recognition Organizer

One of the most interesting new products at the fall Comdex was an organizer that uses a Digital Signal Processor (DSP) chip to allow users to enter commands verbally in five languages, including English, French, Spanish, German and Italian. With a very unusual but functional design and an LCD display that plays back numbers that you've spoken into the system, you can store and retrieve over 700 numbers, 350 names, and 500 verbal messages. The makers claim a voice recognition accuracy of over 97 per cent. Using audio compression, the 512K of memory can be made to hold the equivalent of 2 MB of voice data. The price is low, only $279 US. This product is noteworthy as a possible precursor of the next generation of voice activated consumer information devices. For more information, contact parrot@worldnet.net

SSK WriTalk

This is an electronic message pad that allows users to create messages with an ordinary pen on a touch sensitive surface, and then send and receive messages between WriTalk pads over a phone or fax line. The main advantage is that this exchange can go on in real time as a kind of written or sketched phone conversation. For more information, contact 1-800-SSK-0579, 408-775-1630.

ST Research

The Ultimax 2000 ruggedized palmtop is a 386 MS-DOS computer. Weighing two pounds, it can withstand severe cold, driving

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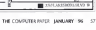

rain and sandstorms six-foot drops and immersion in water The brochure shows a scuba diver holding the computer underwater which seems a bit of an exaggeration — the specs only claim it's water resistant to a depth of three feet For more information, contact 703 550 7000

Sharp Zaurus Wizard OZ-6500, Wizard OZ 9520FX, Locker Mate, etc.

Sharp is one of the best established makers of handheld information devices They still have a large number of calculators in their line (the Canadian catalog lists 35 models), plus eight electronic organizer models, three pocket computers and the Zaurus ZR 5000 K PDA Zaurus is the flagship of the Sharp line, a personal digital assistant that compares favorably with the Newton in terms of out of the box usability, with both a keyboard and pen input and an excellent graphical user interface

The Zaurus has rapidly become one of the most popular PDAs in Japan, with over 500 000 having been sold there in less than a year and a half Major popular features excellent built in software, and a rapidly expanding base of third party e-mail and groupware connectivity products

The Sharp Wizard electronic organizers are more traditional less expensive products than the Zaurus. They weigh 8 6 oz. and 10 5 oz. respectively and both come with a full suite of organizer software preinstalled, including scheduling, filing, phonebook writing and with the OZ-9520FX's touch sensitive screen, the ability to make diagrams or hand written notes and save them.

Sharp makes a variety of accessories for the Wizard OZ-6500 and OZ 9500 models The OZ-9500 peripheral product range is especially rich including an infrared link kit for PC or Mac wireless printer interface the PenCell spreadsheet, a RAM card modem and Link software for file exchange with PC or Mac The OZ-8500 has a modem infrared kit wireless printer interface and Link software as well

The Lockermate is a simple electronic organizer intended "to provide a fun way for pre-teenage and teenage girls to gain more control over their increasingly complicated school work, home and social activities " Right on Barbie! Is math still hard? Though easy to mock this is a well designed attractive and functional product with basic scheduler birthday phone, calculator calendar alarm clock fortune telling and special secret password security programs Price in Canada, about $60

For more information contact 1 800 BE-SHARP or 905 890-2100

Symbol PPT 4600

Based on a 486 SLC/20 with 2 16 MB of RAM 130 MB Hard drive and weighing 1 9 pounds, this is one of the most nicely designed handheld computers we ve seen It has a built in, rotating scanner that can do a variety of data scanning jobs and has a 640x480 screen display that also accepts pen input It s intended especially for military police and transportation applications For more information contact 1 800-SCAN 234 or 1-516-563-2400

Telxon PTC-1134

This is the latest in a family of wireless pen-based computers With a 486 processor, MS Windows For Pen v 1 0 an internal hard drive and a ruggedized chassis the PTC-1134 is a handheld computer designed to run MS DOS and Windows software applications It has the advantage of being based on a version of the standard PC operating system which makes developing custom software applications cheaper and quicker The PTC 1134 comes with a built in Aironet spread spectrum radio for data communications Current users apply the PTC-1134 for Insurance claims processing, cost management in healthcare quality control in manufacturing and logistics and transportation information flow For more information, call 1 800-800-8008

Texas Micro 'Grunt II' (The Soldier's Computer)

This interestingly named product was developed for the US military as a personal computer for field applications (navigation, logistics casualty management), and is intended for rugged civilian uses such as oil and gas exploration and disaster relief operations. It is the most powerful of any of the handheld computers we looked at with an extremely tough, attractive case design a host of connection options, Intel 80486DX4/75 processor, 8-32 MB of RAM 260 MB hard drive and 640x480 pixel, six-inch, 64 grey scale display, Windows for Workgroups 3 1 and Windows for Pen Existing software applications include GPS/GIS mapping/navigation software For more info contact Texas Microsystems at 1-800-627-8700, or 713-541-8200

Vitel Technology TR 107 Tricorder Mark I

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DATAFILE

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actually very different from any of the other handhelds described in this article. The TR 107 is an environmental monitoring instrument whose name is licensed from the famous science fiction TV series.

It incorporates sensors that measure temperature and barometric pressure, electromagnetic field (EMF) emissions, a colorimeter to take precise color readings from plants or other color sources, a light meter, and a clock, timer and calendar, including elapsed time recording. It can also connect to a PC to transmit information and receive additional programming.

The Star Trek connection seemed a bit hokey until we got one to test, whereupon we found that the product is very well made and works as advertised. The casework is an exact duplicate of one of the Tricorder models from ST:TNG, and the device emits sound effects that were digitized from the Star Trek sound track (okay, that feature is hokey, but it is fun). Early adopters of this Canadian made product include NASA, "many" schools, and Star Trek collectors. The device is not cheap at about $500, but it is a unique and useful teaching tool. An initial collectors edition run of 10 000 units is claimed to be selling briskly. For more information, contact 905-951-1219.

Hot Picks

In terms of usability, any good handheld information tool has to do the following well:

- allow the user to enter and save text easily and comfortably
- exchange files between a personal computer and the handheld device
- connect to online systems or networks
- offer basic built-in software as a standard feature (word processing, spreadsheet, database/contact management/organizer, communications) preferably file compatible with basic personal computer business software suites

This minimum mix of features requires good ergonomic design (keyboard/pen interface screen), ruggedness, good battery life and built in or inexpensively added connection options.

The top-of-the-line handheld devices from the major vendors all reflect clever mature technology and a good mix of features.

The Apple MessagePad 120 (Newton) is probably the most sophisticated and visionary of the handhelds though its potential has been stunted a bit by the lack of built in telecom connection and the limited functionality of its original handwriting recognition software. The latest version of the MessagePad with Newton 2.0 software is a significant improvement, but for this user the lack of a keyboard and a built in modem are still significant limitations.

The **HP LX 200** is an excellent product with much of the functionality of a notebook computer: high performance and a large universe of third party products to allow the user to configure it much the same as you would a PC. The **OmniGo**, with its innovative combination of touch entry and a keyboard for entering text, is an extremely compact, powerful and appealing device, probably the most impressive new handheld product of 1995.

The **Sharp Zaurus** is likewise extremely functional with, again, the advantage of a keyboard and touch input.

Our [illegible] true personal favorite is the Psion in its current version, the Psion 3a. Although in [illegible] ways it is technologically less ambitious than some of the other products, its software is rock solid. It is very rugged, and its file transfer and online connectivity options are very simple and idiot proof. Like the HP line, the Psion has a huge user base, and many excellent add-on products and custom applications have been developed for it.

The Future Of The Handheld Information Tool

Well, pencils and paper will still be around in the 21st century and so will simple handheld calculators in all likelihood, but if Microsoft founder Bill Gates has his way, sophisticated handheld computing devices will become even more important to daily life. Gates, in his recently published book The Road Ahead, envisions various kinds of wallet PCs which — in addition to running some version of the Windows operating system — will combine features of smart credit cards with banking machines, modems, and PDAs and full function computers. With a high end wallet PC, you'll be able to do banking, shopping, e-mail, browse the Web and perform current electronic organizer and some business PC functions, as well as place voice phone calls. While it is unlikely to replace the full sized PC in the immediate future, the handheld information device is likely to continue to evolve. It will advance in step with ever changing digital technology to meet our wants and needs for a computer that we can put in our pocket and take with us wherever we go. ❑

The PDA Quest Continues

The HP OmniGo 100 comes close to the PDA I'd actually buy. With a few improvements I could see its progeny (or a future-generation Newton) replacing my reporter's notepad.

It's compact, and the 360-degree hinge means you can fold the unit back on itself just as you might do with the cover of a notepad. Thus folded, you can hold it in your left hand and write on the screen — as you would on a notepad.

Sure, it has a tiny keyboard, but all PDA keyboards are strictly two finger functional. What sets the OmniGo apart is the pen-enabled functions.

The Graffiti handwriting recognition software (first seen on the Newton) works well as long as you take the time to practice the unusual penstrokes. These seem to be a combination of cursive and printed, upper and lower case forms. The OmniGo also has electronic ink, which means you can save images of your scribbles, diagrams, etc.

The rest of the built in software suite — appointment and phone book, calculator, spreadsheet, financial tools etc. — is what you'd expect in any PDA.

What the OmniGo lacks is an infrared port. That's a pity and somewhat surprising, considering HP's aggressive pursuit of infrared. HP printers, laptops and its other PDA, the LX-200, all support infrared communication.

— David Tanaka

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ColorWorks 1.0 for OS/2

BY JEFF HILDEBRAND

Product ColorWorks 1.0 for OS/2
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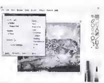

Image editing is one of the most RAM-eating, processor hogging, wait-intensive computing endeavours. True (24 bit) color means that decompressed pictures regularly consume megabytes of RAM, and applying even the simplest of effects means moving those megabytes through your lone CPU while you sit and wait for it to finish. ColorWorks changes all of this.

Image Editing Like You've Never Seen Before

There are three main things that make ColorWorks unique: multithreading, SMP (Symmetric Multi-Processing) optimization and DIMIC (Dynamic In Memory Image Compression). Until ColorWorks, image compression was used mainly to conserve disk space. The most popular of these compression formats have been JPEG (for lossy compression) and GIF (for lossless compression). The people at SPG realized that while OS/2 has virtual memory, the acts of swapping to and from disk are slow and that they could make better use of the physical memory by using compression. When compression is enabled, all image buffers, including the "undo" information, are compressed. SPG claims that you can reduce memory requirements by up to 90 percent with DIMIC. Of course this compression means that the CPU must do more work, which is where the other two features come into play.

Multi-threading is nothing new in the OS/2 world. Briefly, multithreading allows OS/2 to multi-task several portions of a single program. On a single-processor machine multi-threading does not necessarily result in an increase in performance, but on an SMP machine the different "threads" of a single program can run on different processors, potentially resulting in major performance gains. Any multi-threaded OS/2 program will run faster on an SMP machine running OS/2 SMP. SPG took this one step further. ColorWorks has been optimized to intelligently assign threads to processors in order to complete its tasks as quickly as possible.

But what does all this multithreading and SMP optimization really do for the user? Let's say that you have a rather rough image on which you want to perform a smooth operation. This is a pretty common filter to apply and it does not change the image in any radical manner. With most image editors, applying this filter will cause your cursor to turn into an egg-timer (or watch, etc.) and you must wait until the computer has completed this operation before you can continue editing this image or any other you may have loaded.

ColorWorks removes both of these restrictions. If you apply a "smooth" filter to an image and have a pretty good idea of how it will turn out, there is no reason why you should not be able to continue to work on it while the "smooth" process completes. ColorWorks will let you do this and make sure that all your actions are applied in the correct order. If you happen to be applying a complex set of effects to an image and want to work on a different image while the operation proceeds, you can reduce the priority of the threads on the current image so that you can work unimpeded on another image.

The tradeoff for the power of continuous editing is speed. Since ColorWorks doesn't dedicate the CPU to performing any single task, the individual tasks take a little longer. If you choose to wait for each operation to complete before continuing with your editing, no gains will be realized. The key here is that if you feel you can continue, ColorWorks will generally allow you to do so.

The Tools

It's obvious that the programmers at SPG have tried to make the most of whatever resources are available on your PC, but they didn't stop there. A good image editor must have a wide variety of tools, and I am pleased to say that ColorWorks delivers in this department as well. As an example, let's look at filters. ColorWorks provides five smoothing, six sharpening, eight noise reduction, seven edge detection, 31 special and eight custom filters.

Custom filters are especially interesting. It appears that the eight included in the package are samples which mimic other filters, giving the user an idea of how to create their own. Using the custom filters lab, it is possible to design a filter tailored to the specific enhancement you need. Custom filters can be saved to disk and recalled at any time.

In addition to filtering, ColorWorks provides some 175 effects, 19 predefined texture maps and 12 predefined pixel displacement maps. Again, you can create your own texture and displacement maps and save them to disk.

Most of the effects and filters have preview windows so that you can see the results

➤

of your actions before you apply them to the actual image. This is very useful because in addition to being able to specify which filters and effects you want to apply, there are several other parameters you can adjust to alter the way in which the image will be modified.

Filters and effects work a little differently under ColorWorks than in most image editors. Selecting an effect does not put it into immediate use. Rather, you build up a set of effects and filters which you want to apply to the image (or some part of it) and apply them all simultaneously. ColorWorks refers to these collections as "Graphic States" and these can also be saved to disk. In fact, SPG recently started a WWW site (http://www.spg.net.com/) where, among other things, they have made a number of graphic states available and encourage others to upload their own. There is also another reason why ColorWorks does not apply effects immediately — it needs to know where you want the effects applied. Many image editors will only allow you to apply an effect or filter to the entire image, but with ColorWorks you can select areas to apply effects to using the standard editing tools. Applying effects with freehand drawing is impressive, if not speedy.

As a simple example, I loaded an image of a cartoon character's face, then selected the texturize effect using a texture that looks like water droplets. Using the freehand draw tool with a medium-sized brush (blurred a little at the edges), I began drawing lines from the base of the character's eyes down and away from the face. The end result was that it appeared that the character was crying some very cartoon-like tears.

What You Really Need

ColorWorks will run on any machine capable of running OS/2, but if you aren't running at least a high powered 486 you probably won't be too happy with the performance. This may sound unreasonable, but chances are that if you are already doing a lot of image editing, you have a machine in this class right now. SPG also recommends a 24-bit accelerated video card since ColorWorks does all its image editing in 24 bit color even if the original was only 16 or 8-bit (like a GIF). This might seem like a waste of memory, but there is a reason for it: some filters and effects can only be applied to a true-color image, not a palette-mapped one. If you have worked with other image editors, you may have encountered a situation where you could not clean up an image because you received it as a GIF and your editor did not support increasing the number of bits per pixel in the image (I have one like this). By automatically mapping all images to 16.8 million colors, ColorWorks eliminates this annoying problem.

Since I'm not an artist, I asked a friend of mine who is more artistically inclined to check it out and let me know what he thought. At first he wasn't too keen. "I want a paint program, not an image editor," he said. The next morning he was hooked and showed me a half dozen images he had created and touched up.

As a programmer, I can't help but be impressed with the care that went into the creation of ColorWorks. As I mentioned earlier, it is not generally the fastest program out there, but then again this is version 1.0. With this sort of quality in the first version, I can't even begin to speculate about what the next one will be like. ❑

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Expanding Your Office to 32-Bits

BY ROD LAMIRAND

Product: Microsoft Office for Windows 95
From: Microsoft Canada Inc.
Estimated price: $599 or $299 for competitive upgrade

First out of the gate with an integrated office package for Windows 95, is — you guessed it — Microsoft with its Microsoft Office for Windows 95. This bundle of business programs known as a *suite* in the business hit the stores at the same time as Windows 95 itself. Microsoft Office for Windows 95 (Office) comes in two editions: Microsoft Office Standard and Microsoft Office Professional. The former comprises Word for Windows 95, Excel for Windows 95, PowerPoint for Windows 95 and Schedule+ 95. The latter also includes Microsoft Access. The CD version of Office Professional adds Bookshelf 95.

There are regular and upgrade prices for both editions and, of course, they may be available for less in retail stores. The Win95 version of Microsoft Access came on the market a couple of months after the release of Office and isn't included in this review.

The arrival of Office at the same time as the new operating system is not coincidental. Microsoft intends Office to build on the success of Windows 95. Windows is solidly entrenched in your home. Office will be the foot in your business door.

Around The Office

Of course, Office 95 applications are 32-bit programs. This means better multi-tasking, long file names and some small speed increases with processor-intensive activities such as recalculating a spreadsheet. Other improvements include right-click mouse commands, Dialog Tips and a small but nice improvement that is becoming universal to Win95 applications: proportional scroll bar sliders. Now, by simply looking at the size of the scroll bar slider you can get a good idea of the overall size of a document.

Office 95 brings its components into line with a common interface for all programs. Familiarity with any program will translate into user comfort in the others. An Office shortcut bar installs to the right edge of your Win95 desktop. Various icons for Office applications and some of their functions appear on the shortcut bar. The movable, customizable, one-click bar can be set to auto-hide or attach to any edge of the desktop. This feature is a boon to novice users who can add an icon containing only their files which, once clicked, will open the appropriate program and load that file.

The Answer Wizard is accessible from all Office components. This help feature attempts to answer plain language assistance queries with correct instructions. For example "How do I print on two sides of the page?" will bring up a list of topics under the heading "Print" under which there is a sub heading "paper setting." Perhaps there will one day be some use for this technology but at this point it is more glitter than gold. The Help Index on the other hand is excellent. The on-line assistance available with Office is enormous. Also there are a number of lessons and walk-throughs that can not only show you what to do but can do the job in the process.

AutoCorrect has been expanded in two ways. It is available in Excel, PowerPoint and Access rather than just Word, and it is more powerful. The AutoCorrect default list, which installs automatically, has grown from a few dozen to a few hundred choices. For example typing *librry, libary* or *libarary* will all automatically yield *library*. Even more amazing, typing the following sentence: *On wednesday you'll recieve teh brochure I wrote called "wELCOME to Microsoft(r) WOrd."* This will automatically yield: *On Wednesday you'll receive the brochure I wrote called "Welcome to Microsoft® Word."* This type of feature is what Microsoft is referring to as IntelliSense. IntelliSense technology is responsible for a number of features throughout Office which attempt to analyze the user's actions and offer suggestions.

Lastly, Office 95 introduces the metaphor of a binder which combines files from any of its applications into one entity. Office Binder is a work space where a user can drag text documents or PowerPoint files to combine as one group. If, for example, you are making a presentation which includes a spreadsheet or database, you can place all the appropriate files together and copy or save them as a unit. Binder will even help you put them on disks in a smooth and systematic way. These improvements are the glue which makes Microsoft Office for Windows 95 a truly integrated package. However, what makes it a good package are its applications.

Microsoft Word for Windows 95

Microsoft Word, Lotus Word Pro (previously called AmiPro) and WordPerfect have been vying for top dog in the Windows word processor wars for years. With the introduction of Microsoft Word for Windows 95 (a.k.a. Word 7.0), Microsoft ups the ante and pulls into the lead. At this point word processors have become very sophisticated; any of these programs will be more than adequate for 90 percent of the population.

General usability is top-notch and there is little room to improve until word processors can handle direct thought entry. Sometimes they almost seem like mind readers now. Word 7.0 has a feature which runs every word through a dictionary silently in the background to check for spelling. If you have misspelt a word, Word will put a wavy red line

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underneath it. Right clicking on the word brings up a selection of suggested spellings or Add Ignore options. Although it is tempting to stop and correct your errors every time Word underlines them, you should wait until you have finished your typing so you don't slow down your data entry. Also Word knows where all your mistakes are and when you do run the spell checker it will move through your document like lightening.

Other numerous small improvements are Word's recognition of accidentally hitting the Caps Lock key and smarter implementation of the two capitals rule which now leaves two capitals followed by a small case letter alone if appropriate. Thus *HEllo* is corrected but *TVs* is not. And if AutoCorrect changes something that you want left alone, such as my use of the word *HEllo* in the last sentence, backspacing over the correction and retyping the mistake will add that variation of the word to an exception list. Future occurrences of this word will be underlined as incorrect but not automatically corrected. Word is smart enough to change *1st* to 1st in fact, it is determined to do so. Also a dash or number followed by text will become a bulleted list and a series of dashes a solid page wide line.

Import/export filters are improved and updated, a new print option allows selection of a printer without changing the default, and numerous other small but helpful improvements have been made. Word is as sophisticated as any desktop word processor and can perform all the merge and embedding functions that any business would need.

Microsoft Excel for Windows 95

AutoEverything. Microsoft's spreadsheet program is re-vamped in Office 95 with a number of improvements in automation. AutoFilter, AutoComplete and AutoCalculate are examples of Microsoft's IntelliSense technology.

AutoFilter allows filtering by any entry or by a customizable list of entries. The Top Ten list will automatically make a list of the most commonly used values, top or bottom, in any list.

AutoComplete, as the name implies, attempts to complete cells in a column based on the first few entries. Monday, Tuesday, Wednesday will continue with the days of the week to the end of the highlighted area. Entering a,b,c or 1,2,3 in concurrent cells will provide the expected continuation. Also, entering the same name, *The Computer Paper*, for example, will cause Excel to automatically finish your typing after the first few letters. If this is an incorrect assumption, continuing to type will place the correct letters in the cell.

AutoCalculate is a very useful ability of Excel 95. You can finally put away your calculator because any time you highlight cells, be they in a row, a column, or completely separate, AutoCalculate will place those cells' total on the bar at the bottom of the screen. Here too you will find those cells' average, highest and lowest value and the number of cells selected. Rather than having to interrupt your spreadsheet work, AutoCalculate is one of those things that makes you wonder why it wasn't thought of before.

One small and yet inexplicably cool improvement is the way that Excel deals with deletions and additions to the spreadsheet. In both Word and Excel, adding or deleting a new line or column between others causes the existing data to slide into its new position rather than jump. Under the old system, if you blinked or looked away at the wrong moment, you would be momentarily lost while your eyes rediscovered your place. Now the smooth slide of the data to its new position keeps you visually located.

Like all the other Office 95 applications, Excel implements the Object Linking and Embedding 2.0 specification (OLE 2.0) which improves the transfer and connection of data. Because of this improvement, drag and drop capabilities between Office components replace the copy to clipboard method. With its great import/export and tight integration with the rest of Office, Excel is a real office workhorse. Excel for 95 is only an evolution of its earlier incarnations, but all those little enhancements make its overall usability rating high.

Microsoft PowerPoint for Windows 95

Although *de rigueur* for legions of Microsofties, PowerPoint has never set the presentation standard outside of Redmond. PowerPoint 95 goes a long way to improving this. It spices up its animation and sound effects and throws in a few new features.

Special effects such as text fly-in are enhanced. Your bulleted points can materialize or slide in from opposite sides. Complete control of your fonts, sizes and styles is easy, although the defaults in many of the pre-set presentations are often perfect.

You can have your graphics appear all at once or one after another to build a scene. Clip art and backgrounds are numerous though not exhaustive. AutoClipArt will scan your presentation for key words then compare them to a descriptor list of the clip art collection. This example of IntelliSense technology again crosses the line between helpful to almost insulting (although I may be overestimating the ability of my fellow computer users). Enhanced choice of colors and patterns is included as are many pre-set generic presentations found under AutoContent, in which you only need to add your text and/or graphic.

There is a new style checker which will check your grammar and a Pack and Go Wizard to help you remember all the files associated with your presentation. AutoCorrect is a feature of PowerPoint and, as an OLE mini-application, common to all Office components, any abbreviations that you have set up in Word or Excel are automatically performed in PowerPoint. PowerPoint also has Answer Wizards and can import, though not simply open, PowerPoint 4.0 files. More than enough for most of us but not leading the field, Microsoft PowerPoint for Windows 95 runs in the middle of the pack but is gaining ground.

Buy or Wait

This product is an improvement, not a new product. However like pennies, many small improvements can really add up. The cost of Office is worth it if you are considering buying any one of its components. However you have to ask yourself if the layout for Microsoft Office for Windows 95 is worth the increased productivity. If you have moved to Windows 95 you have made a choice to jump into the Microsoft vision of the future. You have already made the biggest commitment in your hardware, operating system and training. To go that road and then stop would be to lose the benefits you sought to gain.

There is very little to criticize in Office 95. Microsoft has made this suite as complete and useful as it knows how. If you do buy Office 95 — for your business, you will be getting perhaps the best business desktop software available. You may also be starting down a road that will find Microsoft software running all your systems. ❑

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As unbelievable as it might seem there are some drawbacks to being a world famous computer journalist. Not the least of which is that anyone you've ever met who owns a computer eventually calls for some troubleshooting or advice.

Having survived years of such calls I benignly believed that Windows 95 would go a long way toward freeing my phone from persnickety "howcomemy computerwon't *insert your-problem here?*" calls. The Gates gang had made several simple promises: no more 640K memory barrier, no more incomprehensible DOS error messages, and lightening speed thanks to finally giving our 32 bit chips a 32 bit operating system.

How callow of me to believe them.

Only days into the era of Win 95 my phone started ringing. "I just loaded Windows 95 and my computer is really slow now!" A increasingly incessant lament. My pat response initially was that because Windows 95 is a 32 bit operating system and everyone is still using all their original 16 bit applications, Windows 95 has to go through some kind of translation procedure before pumping stuff onto the screen... and that makes everything run slower. "However," I smugly continued, "once you upgrade to versions of *Whatever For Windows 95* you're going to see some real speed increases."

The point of all of this is that I finally got hold of my own very first *Whatever For Windows 95* a couple of weeks ago and have since become rather too familiar with the taste of hearty helpings of crow.

Having received Microsoft Works for Windows 95, I heartily flung the CD-ROM into my drive in anxious anticipation of a fix for the slowdown I'd experienced myself since installing multiple beta versions of Windows 95 throughout the year.

I should mention that I've been using MS Works in its various incarnations for about six years. As an integrated word processor, database, spreadsheet and com-

Continued on page 68

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Microsoft Works

Continued from page 64

munications package. I find it takes care of all my humble requirements without all the cumbersome, hard-drive eating add-ons of Microsoft's exceptionally popular Office. Anyone thinking about their first — or a new — integrated package should take a serious look at Works.

The first thing I noticed about this Win 95 version is that, for the first time Microsoft has radically changed the overall appearance. Marching through virtually all the previous versions, each upgrade had been a simple refinement of what had gone before.

This time they decided to essentially alter the way the worker works with Works. I'll explain some of these changes momentarily but what's more important is that Works For Windows 95 still ran at the same awkward pace as the 16-bit version on my DX/2 50 powered notebook which has, incidentally, 12 MB of RAM.

After taking several stabs and figuring this out on my own I finally called Microsoft about the mystery of the missing speed. And their explanation should serve as a warning to all intending to buy any Microsoft Whatever For Windows 95.

It turns out that — and I'm loosely paraphrasing the official response here — rather than working on increased speed for the current Windows 95 application upgrades Microsoft decided to focus on increased efficiency for the user when performing tasks.

Microsoft had done several user surveys and determined that customers wanted it to be easier to actually get things done so they totally revamped both Works and Office to accommodate that demand. They added a whole bunch of new features which, of course, cripples any potential for increased speed — for now at least. The result is that this new version of Works is rife with what we now call Wizards, the currently fashionable method of leading computerists inexorably toward an end result by means of yes and no questions. "Do you want to read on?" Yes. Are you enjoying this article? Yes. Etc.

The promo sheet tells me that the new Works incorporates nearly 40 common business, home and education tasks in Wizard form, from creating a letterhead through constructing an address book to sending an invoice or even writing a test. Though I personally never had any trouble performing any of those tasks (except perhaps for writing a test) the Microsoft representative I spoke with tells me that these Wizards are a genuine hit with consumers. That means we're unlikely to be free of them any time soon.

Microsoft had done several user surveys and determined that customers wanted it to be easier to actually get things done

If you get the CD-ROM version of Works it has Microsoft's popular Bookshelf of reference materials built in. As long as you have the disk in the CD-ROM drive all you have to do is push the Bookshelf button on the taskbar and it instantly (more or less) pops up. There's a similar button for Microsoft's Encarta encyclopedia too. Again though, you have to make sure the Encarta disk is in the CD-ROM drive.

The seven pages of press bumph I received outlines a total of 35 new features in Works along with 15 enhancements to previous abilities. Though many of these are to be expected from any up-to-date package, some are actually quite appealing.

An equation editor, for example, lets you add those previously awkward mathematical symbols and formulae to your documents. The font window on the taskbar can show you how a font looks before you select it. There's loads of improved help and they've thrown in a few Word features like bullets and borders with shading. All in all, too many things to describe here.

As a Works user tried and true, I wasn't totally enamored with all of the so-called improvements in this Windows 95 version, but continue to recommend Works for people with only diffident computational ambitions. However, now that I've been told exactly what's behind Microsoft's *Whatever For Windows 95* strategy, I won't be touting the switches nearly so soundly. ❑

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DeScribe Voyager:

A Word Processor for Warp, Win 95 and NT

BY GERALD CALLOW

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DeScribe version 5 is a 32-bit word processing package that will be familiar to many Warp users. It is a mature, full-featured OS/2 word processor that has won its share of awards.

But recently, in an astute marketing move, the company introduced DeScribe Voyager, a multi-platform CD which contains versions of the word processor for OS/2 2.x and Warp, Windows 95, Windows NT and Windows 3.1 (the latter is 16-bit). We've seen the Voyager CD — which also includes a full manual — for approximately $70 in a local computer store, making it one of the best 32-bit software deals going.

This review covers the OS/2 version, which is also available as a separate product on diskette. The Voyager version is the same as the version 5 that ships on disk, except that it is single user only. Most of the features discussed are common to all the 32-bit versions, apart from platform-specific features like Rexx support.

DeScribe allows you to create a very professional-looking document, but you should first familiarize yourself with the application to make the most of its many features. I spent a few hours experimenting and was soon dropping justified text insets all over the place with an appreciative grin on my face.

DeScribe is multi-threaded to take advantage of the operating system's capabilities. Most of the application's power comes from the properties which can be used to define nearly every aspect of the document's appearance. Even the kerning ratio can be defined.

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example are frames which appear in the same position on every page Frames can be anchored to specific text within the document when the text is moved or copied the frame is moved or copied as well

When you place a frame within another frame the text in the surrounding area flows automatically around the new frame retaining its style perfectly For example if a new frame is created within a frame containing justified text the text will become justified on both sides of the new frame that is assuming that the new frame isn't transparent, in which case the text will flow under the new frame

Frames can also contain graphics either imported bitmaps or graphics drawn using DeScribe's drawing tools. Frames can be brought to the front, or sent to the back. Sending a frame containing a graphic to the back causes text to display on top of it (assuming that the surrounding frame is transparent; this is very nice for letterhead stationery or other little pictures with text running over top of them)

Multiple columns are very simple to create and use simply tell DeScribe that you want more than one column You can have up to 20 columns on a page If you want you can drop little text inset frames all over a 20 column page and the column text will flow around them

The appearance of text within frames can be altered by using a style Styles are hierarchical as well, allowing styles defined as children to inherit the properties of the parent style

For example suppose you've defined the style *body* to be justified Times Roman. A child of body called bold, will contain only the unique property of being bold face it will inherit the body properties of being justified Times Roman This is similar to assigning style variations in PageMaker using the *based on* feature.

The style palette appears as a floating window containing a tree To change the style simply select the text to be altered and choose a style

DeScribe allows the definition of a Master Document which contains the individual components of a complete document This allows different authors to work on separate sections which can be combined later The table of contents can be generated into a file which is included in the Master Repaginating the Master Document will renumber the sections correctly

DeScribe also provides facilities to assist in the creation of glossaries and indices to maintain and control revisions to print envelopes and labels to merge documents with data files and to maintain stationery layouts

DeScribe Inc has devoted some effort to allowing its application to handle tables easily For the most part, they have succeeded. Tables are very easy to create and manipulate using DeScribe Columns and rows can be added subtracted divided multiplied or averaged. This is useful for simple things such as bills of materials or invoices However, where more complex number crunching is required, a spreadsheet would be more appropriate

Table borders and shading can be defined for a group of cells or for a single cell During my experimentation I discovered something that I couldn't do usually I create tables with 10 percent shading and double borders in the title row DeScribe allows only shading of 20 percent or greater density and single borders

DeScribe contains a wealth of spelling, grammar dictionary thesaurus and readability aids Foreign language support is extensive However as I do not write Portuguese I did not put this to the test There are also several *DeTours* included which demonstrate some of the application's more practical features and uses

Like most OS/2 applications DeScribe allows the user to invoke procedures written in Rexx OS/2's native script language DeScribe supports a rich script language of its own providing the user with a way to automate forms or operations As well a macro can be given an icon on the toolbar to allow the user to invoke it with a single click of the mouse.

One aspect of DeScribe that I did not appreciate at first is the StickyNote. When a "note" is added a frame with a yellow background is created these frames can contain text and will appear only when the user chooses to view the notes. These can be used to annotate the text of a document or to comment on the content without changing it. Again useful for situations where several individuals are working on a document.

A trivial yet nice touch is the ability to alter the size of the on-screen ruler to match real measurements. That is, the ruler on the monitor matches a real ruler and the output on the monitor matches what is printed

A few oddities

Overall performance on a 486 DX/50 was very snappy in most areas I did experience problems with the import function I started a new document and imported a 10-page Word 6 file. The translation runs in a separate thread, which wasn't particularly useful to me on this occasion because I wanted to work with that specific document Had I been working on another document threading would have allowed me to do both simultaneously In theory this could be useful However the priority of the import thread was so high that it dragged down the performance of my system unacceptably And the import itself took over 90 seconds to complete.

Moreover the results were disappointing DeScribe had translated some of the Word document's paragraph ends as spaces which ruined much of the formatting The Word file contained only double spaced text with some italics More complex documents such as technical manuals would suffer worse mangling during an import.

Another aspect of DeScribe that confused me was the apparent lack of an obvious way to start headers and footers on a specific page with a specific page number. There is a way to do it, but it is not intuitive

The quality of the printed characters was a little coarser and more jagged than I was accustomed to I found that I could produce more appealing output by turning on the Printer Fonts Only checkbox in the printer setup

Overall, I was very impressed by DeScribe it suits both casual and professional users providing a wealth of production aids. For situations where multiple individuals work on separate parts of a document DeScribe is a good choice However because of the difficulties I experienced using the import facilities, I would recommend that if the application is used to master a complete document, each section should be a DeScribe document ❑

Contact DeScribe Inc. 941 732 5500

Industry Perspective

Graphics Applications Warm to Win95

BY GEOF WHEELWRIGHT

Following Novell's recent announcement that it plans to sell off its PerfectOffice business applications software business, and IBM's evolving approach to selling the Lotus SmartSuite range of products it would seem that the word "competition" has gone out of the mainstream applications business Microsoft now claims upwards of 70 percent worldwide market share for personal spreadsheets, databases and word processors.

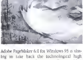
There is one last bastion of competition in the desktop software business and it's an area where Microsoft has never traditionally been strong In fact Microsoft is not even a significant player here This sector is the professional graphics and illustration software sector currently led by Adobe Systems Inc Corel Corp and Micrografx Inc

In The Adobe Hut

All three have been quick to announce Windows 95 versions of their products that promise to keep this healthy level of competition alive in the 32 bit software sector The leader at the moment is Adobe Systems They handily folded Windows 95 versions of all the Aldus Corp graphics and page design tools into their product mix and recently sealed the deal to complete their acquisition of Frame Technology (producers of the highly respected FrameMaker package for professional publishing)

Adobe says its aim is to offer "A complete Windows 95 solution for creating combining and delivering visually rich information in printed or electronic form " The company began shipping a Windows 95 "Logo compliant" version of Adobe PageMaker in November The company has said it expects that most of its other applications should ship Windows 95 logo compliant in 1996

PageMaker



Adobe PageMaker 6.0 for Windows 95 is aiming to take back the technological high ground from Quark — as well as position itself as a good tool for designing pages for online use Adobe says that Windows 95-specific enhancements to PageMaker include support for 32 bit addressing and its ability to act as an OLE 2 0 client application (which means that it will let you drag objects directly into PageMaker from OLE 2 0 server applications such as Microsoft Word and Excel)

On the Internet support front PageMaker 6 0 includes technology for creating files in Adobe's Portable Document Format (PDF as used by Adobe Acrobat) and authoring Hypertext Markup Language (HTML) documents for electronic publishing on the World Wide Web

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Photoshop

Adobe Photoshop for Windows 95 promises to make it easier [illegible] add-ons (such as scanners) speed printing and provide easier access to network files. Although the product available for the past few months is nominally compatible with Windows 95 — supporting features such as the Windows 95 user interface/shell long file names Universal Naming Convention (UNC) pathnames and right mouse button capabilities — the fully logo compliant version is supposed to add OLE 2.0 and simple mail-enable (MAPI) support. This version will also feature support for Microsoft's Blackbird platform the new 32-bit TWAIN Data Source Manager Thunker and include the recently announced GIF89a Export Plug-in.

More is More With Corel

Corel Corp. has never heard the expression "less is more." There is nothing understated or subtle about the company's CorelDraw 6 for Windows 95. It's a 32-bit version of the company's popular graphics package that includes five applications for illustration photo-editing and painting business and multimedia presentations 3D rendering and animation. As usual Corel has put everything but the kitchen sink into this product. Even a brief tour of CorelDraw 6 for Windows 95 yields a long list of built-in applications. They include:

COREL®

As usual, Corel has put everything but the kitchen sink into this product

- CorelDraw: a 32-bit version of the classic vector based drawing application
- Corel Photo-Paint: a paint and photo retouching application
- Corel PRESENTS: a new business and multimedia presentation application
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- Corel Presents Runtime Player: used for distributing presentations. It includes 25,000+ clipart images and symbols, 1000+ TrueType and Type 1 fonts 1000+ photos and 750+ 3D models.
- 50 CorelDraw templates with 300+ full colored bitmap textures, 125+ natural media brushes for Corel PHOTO PAINT, 260+ video clips 1500+ "actors props and sounds" 100+ floating objects 80+ chart types 200+ chart samples 300+ presentation backgrounds and 50 presentation templates

One interesting wrinkle to the way Corel is marketing this product is that it is *not* a substitute for previous versions. A few years ago as successive versions of CorelDraw appeared and the product began to evolve into a comprehensive graphics suite Corel decided to market several versions at various price points in order to appeal to a wider range of consumers.

This strategy has proved successful in the past and has helped increase Corel's market share although it will be interesting to see how it plays in a Windows 95 world. It is not at all clear how many users will want to buy versions of the product that are perceived as "old technology" — that is not optimized for Windows 95. At any rate Corel will continue to sell CorelDraw 3 for Windows 3.x CorelDraw 4 for Windows 3.x CorelDraw 5 for Windows 3.x at the same time as CorelDraw 6 for Windows 95.

Micrografx Makes A Splash With ABC

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Texas-based Micrografx Inc. probably has more right to claim Windows market leadership than anyone else. They were one of the first companies to ship a graphics product for Windows 1.0 almost ten years ago. But unfortunately market share is not awarded on the basis of historical loyalty to an operating environment.

Micrografx appears to be keenly aware of this fact and recently announced that it is beefing up the graphics capabilities of its ABC Graphics Suite for Windows 95 by including Visual Software's Instant 3D for Windows 95.

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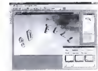

Micrografx has also been in the Windows 95 arena since before the launch, with pre-release versions of the ABC Graphics Suite available last spring for users of the Windows 95 preview version. Shrink wrapped product began shipping around the Windows 95 launch time.

ABC Graphics Suite is positioned by Micrografx as "The first integrated offering of award winning diagramming, flowcharting, clipart management, painting, image editing and drawing tools, with an interface designed for Microsoft Office for Windows 95." In addition to using the Office interface, Micrografx says the ABC Graphics Suite supports the Office Binder, which lets users seamlessly combine data from a variety of applications.

ABC Media Manager 6.0 provides an easy method of dragging and dropping clipart, photos and diagramming symbols into and out of the Micrografx ABC Graphics Suite or any Windows 95 application

Like the ABC Graphics Suite, Instant 3D also carries the Microsoft Windows 95 and Microsoft Office 95 logos. Micrografx says it should provide a quick way to add 3D text and graphics to any component of the ABC Graphics Suite such as Micrografx Designer or Picture Publisher, or to easily incorporate 3D in Word for Windows documents, PowerPoint presentations or any other Windows 95 application.

More importantly for Micrografx, it provides the company with a graceful way out of the inevitable comparisons with CorelDraw 6 for Windows 95, which comes with a number of 3D utilities that Micrografx obviously felt were lacking in the originally planned ABC Graphics Suite. "Both customer feedback and International Data Corp. research indicate that 3D is among the most requested features of the ideal graphics suite," suggested J. Paul Grayson, chairman and CEO of Micrografx, after the announcement of the deal to include Instant 3D in the Micrografx suite.

In addition to specific enhancements related to Windows 95 and Office 95, the Micrografx ABC Graphics Suite provides a number of other new features. One of the most innovative is the newly-developed ABC Media Manager 6.0, which is supposed to provide an easy method of dragging and dropping clipart, photos and diagramming symbols into and out of the Micrografx ABC Graphics Suite or any Windows 95 application. The ABC Media Manager is also designed to transparently manage more than 50 file formats, including TIFF, BMP, DXF and CorelDraw.

Who Will Win?

The question of who is likely to come out on top in the Windows 95 market is tough. Adobe is by far the biggest player of the lot, with a vast range of products, deep corporate pockets and lots of technological resources to get the job done. It also has a very loyal base of users — particularly for PageMaker and Photoshop — but they will have to be convinced of the merits of moving to a new Windows 95 implementation before taking the plunge and abandoning the Windows 3.x versions of those products.

Corel is probably taking the safest approach by having a full-configured Windows 95 version of CorelDraw 6.0 ready to go, but at the same time continuing to sell its previous Windows 3.x versions at lower prices to keep its bread and butter business going. The major question for Corel will be in how the market judges its implementation of a Windows 95 application.

Micrografx, on the other hand, has worked hand in glove with Microsoft's Windows 95 team on developing the ABC Graphics Suite — and has a long history of experience in the Windows NT arena with lots of feedback from its pre-release version of the product. If it proves more robust and better integrated with Windows 95 than either of the other two offerings, this could be the product that moves Micrografx to the front of the graphics software line up. ❑

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Intel's Pentium Pro: The Pinnacle of x86 Performance

BY ROY CHARTIER

High End Desktop or x86 Workstation?

With the Pentium Pro Intel has catapulted x86 computing into the stratosphere bringing workstation-class performance to the desktop.

On November 1 1995 Intel released its sixth generation x86 microprocessor the Pentium Pro The Pentium Pro certainly will cause a stir in the mid to high-end workstation and server market segments not accustomed to PC price/performance High-end applications in scientific technical financial and graphical arenas that normally use SGI, Sun, IBM or other RISC workstations and servers will for the first time have the option of considering Intel as well

The Pentium Pro has been designed from the ground up for workstation and server class computing, as it contains glueless logic supporting up to four-way symmetric multiprocessing (SMP) Adding another CPU to a server or workstation requires nothing more than socketing an additional CPU onto the system's motherboard In addition, the Pentium Pro has a high-speed interface to the L2 cache that operates at the CPU's clock speed — unlike a Pentium with a maximum speed of 66 MHz — along with a 64-bit interface to main memory which supports a maximum sustained throughput of 528 MB/sec

In addition Intel has introduced two new high end PCI chipsets the 82450KX PCIset for high end desktops and workstations supporting up to two processors and the 82450GX PCIset that supports multiple PCI buses and glueless multiprocessing of up to four processors The lower-end Mars PCIset is expected in the first half of 1996 and will be designed for midrange single-processor desktop systems

SMP workstations or servers will only see a performance benefit if they run multi threaded applications on a multi-threaded OS such as Windows NT In an SMP workstation the operating system can run all the CPUs in the system simultaneously This allows more processes to occur simultaneously without the performance degradation that would occur in a uniprocessor system

An SMP system the operating system can break a single process into smaller subprocesses and allot each subprocess to different CPUs for execution simultaneously

The operating system creates threads to keep track of which CPUs are executing which subprocesses Many workstation-level applications are multi-threaded and will see a significant performance gain in a Pentium Pro SMP system Running some filters in Adobe Photoshop on a dual Pentium Pro based system saw performance gains of over 80 percent when compared to a similar uniprocessor Pentium Pro system Intel estimates that a dual processor Pentium Pro system will scale performance by 1 7 for processor intensive operations and a quad-processor Pentium Pro system will scale performance by 3 3

AST Dell Hewlett Packard, Intergraph and Micron — among other vendors — are all shipping SMP workstations and servers In addition, most brand-name manufacturers are shipping high-end desktops as well In late November a 180 MHz Pentium Pro based system with 16 MB RAM 1 Gigabyte HD a quad speed CD-ROM and 15 inch monitor with all the trimmings would cost approximately $5 400 A similarly configured 133 MHz Pentium system would be in the $4 000 range If you have an absolute need for speed a Pentium Pro system is certainly within your reach

Designed for 32 bit Computing

The Pentium Pro is the first mass-produced microprocessor to integrate both the processor and the secondary cache onto a single multi-chip module Or, in Intel parlance a dual cavity The Pentium Pro integrates a 5 5 million transistor processor and a 15 5 million transistor 256K L2 cache into a single 387 pin PGA.

The 150 MHz version of the Pentium Pro is manufactured using a 0.6 micron process and the 180 and 200 MHz versions are manufactured with a 0.35 micron manufacturing process A 166 MHz version with 512k L2 cache is planned for the first quarter of 1996 A 512k version of the 200 MHz Pentium Pro is also planned for sometime in the first half of 1996 Based on current technology advancements the Pentium Pro could conceivably reach speeds in excess of 350 MHz on a 0 2 micron process by late 1997

Intel began working on the Pentium Pro formerly known by the code name P6 back in 1990 At that time it was believed that by the time the P6 came to market 32-bit operating systems and applications would be commonplace Even Microsoft asserted that by 1994 Windows NT would be the OS of choice and something called *Chicago* — now known as Windows95 — would be the OS for those

Continued on page **77**

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MPC

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features

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features

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NEC

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features

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features

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Intel's Pentium Pro

Continued from page **74**

with low end 4 MB 386 machines. As is often the case with most predictions in this industry they were wrong

As a result Intel has targeted the Pentium Pro for workstations and servers running 32-bit operating systems and applications. Intel's purpose is to mitigate criticism that the Pentium Pro runs 16-bit code poorly

Recall that when the Pentium was originally introduced applications would have to have been recompiled in order to see a significant performance increase over the then popular 486DX2 As it turned out a 66 MHz Pentium system was barely 50 percent faster than a DX2/66-based system at over twice the price Ultimately when 90 and 100 MHz Pentiums began appearing on the desktop the reign of the 486DX2 was over. Similarly when 300 MHz plus Pentium Pro systems start appearing no Pentium system, now or in the future even when running 16-bit code will be able to keep up

Quite simply the Pentium Pro is not designed to run 16 bit applications The Pentium Pro's superpipelined design makes it susceptible to frequent stalls A 180 MHz Pentium Pro system would be roughly equivalent to a similarly configured 133 MHz Pentium system when running 16-bit applications The Pentium Pro's deep pipeline does not handle failed branch predictions well which apparently occur with great frequency in 16-bit code As a result, it can suffer up to a six-cycle penalty when clearing the pipeline. This seriously diminishes performance as the execution units in the processor must wait idling until the stall is resolved

Currently Microsoft is investing a great deal of programming resources to tune the next version of Windows 95 — presumably Windows 96 — to increase its 32-bitness to enhance performance on a Pentium Pro-based system

Also by late 1996 much of the existing 16-bit software will have been converted to 32 bit and the necessity of relying on legacy 16-bit applications will be greatly diminished This will allow Pentium Pro systems to achieve higher performance and allow them to compete more effectively on the desktop versus the Pentium and other 5th and 6th generation x86 microprocessors

Performance

Pentium Pro-based systems perform significantly faster than their Pentium counterparts when running 32 bit code System level benchmarks using BAPCo's SYSMarkNT show a 200 MHz Pentium Pro-based reference system to be exactly twice as fast as a 133 MHz Pentium based system, scoring 648 versus 323 respectively Note the SYSMarkNT benchmark is not the same as the SYSMark95 benchmark used by *The Computer Paper* to analyze performance of machines running Windows 3.x The SYSMarkNT benchmark is based on a 50 MHz 486DX system running Windows NT 3.51 as a baseline that produces a score of 100 (Pentium Pro benchmarks were obtained on the Intel *Alder* platform with 128Mb FPM DRAM Pentium benchmarks use Xtended Xpress Desktop with 64Mb FPM DRAM)

Intel lent us a preproduction 133 MHz Pentium Pro system on which we ran a number of popular 32-bit applications for Windows NT and Windows 95 As this system was a preproduction model, we are not allowed to publish specific application benchmark results obtained from it However Intel has allowed us to scale our results to emulate a 150 MHz Pentium Pro benchmarked against our own 133 MHz Pentium reference system (both systems were configured with 32 MB of 60ns fast page mode DRAM and 256K L2 cache) We tested a number of functions in Adobe Photoshop 3.0.4 and Microsoft Word 7.0 in both Windows95 and Windows NT

In Adobe Photoshop we ran a number of functions and filters and found the 150 MHz Pentium Pro to be slightly over three times faster in Windows NT and just over twice as fast in Windows 95 when compared to the 133 MHz Pentium system On some functions particularly using a CMYK conversion or a Gaussian Blur filter, the Pentium Pro was over four and a half times faster Search and replace tests in Microsoft Word returned similar results.

At the system level the Pentium Pro rates approximately 1.4 times the performance of a Pentium-based system on a clock-for clock basis when running Windows NT When running Windows 95, the ratio drops to about 1.07

It is important to keep in mind that specific tests, such as the CMYK conversion or Gaussian Blur are not representative of system level performance These functions test the processor the floating-point unit (math co processor) and the memory bus bandwidth Tests such as SYSMarkNT also test a system's disk sub-system and taken as a whole are representative of the average performance a system would deliver.

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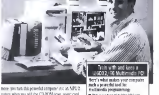

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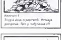
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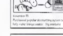
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Pentium Pro Competitors

Advanced Micro Devices (AMD)

AMD's 5th generation K5 microprocessor the first of AMD's K86-family of processors has suffered a number of delays because of validation concerns.

The K5 is an entirely AMD-developed core manufactured containing 4.3 million transistors on a 0.5 micron process, which will be shifted to a more advanced 0.35 micron process sometime in 1996. The K5 is a four issue superscalar core very similar to that of the Pentium Pro which supports speculative execution and register renaming.

The K5 has 8K and 16K set-associative L1 data and instruction caches. AMD has not yet released performance data, however they claim it is approximately 30 percent faster than a Pentium per clock cycle. AMD sacrificed some FPU performance for this gain however as the K5's FPU is roughly onpar with that of a Pentium.

Conceivably a 100 MHz K5 should perform on par with a 133 MHz Pentium system. Based on this estimated performance it is difficult to see how the K5 could compete with the Pentium Pro.

By the time the 100 MHz K5 is finally shipping in systems 166 and perhaps 180 MHz Pentium systems will be readily available and clearly able to eclipse the K5's performance. The K5 would have to be ramped to over 166 MHz to compete with a 150 MHz Pentium Pro. Presumably the K5 will max out at 200 MHz in 1997 which will allow it to compete with lower end Pentium Pro and higher end Pentium systems. However by that time, 300+ MHz Pentium Pro systems will be available far exceeding the performance of any AMD processor. Clearly the K5 will be a hot product, but AMD is still roughly a full generation behind Intel in performance and probably will continue to be for the foreseeable future. AMD's goal however is not to surpass Intel as the market leader. Rather it would seem that AMD is attempting to be the foremost alternative.

Cyrix

Cyrix's curiously named 5th generation processor the 6x86 formerly known as the M1, has just recently begun volume production. Both 100 and 120 MHz versions should start appearing in desktops by early-to-mid 1996.

The 6x86 is a two-issue superscalar seven stage superpipelined design with a unified 16K set associative L1 cache. Like the K5 the 6x86 is Pentium pin compatible. Also like the K5 Pentium and Pentium Pro the 6x86 has a 64-bit external data bus and a 32-bit address bus. According to Cyrix's own benchmarks the 100 MHz 6x86 scores slightly better than the best 133 MHz Pentium system. However when comparing the Cyrix 120 MHz 6x86 reference systems to the fastest system benchmarked using Ziff-Davis Winstone 95, it scores approximately 17-percent faster returning a score of 245 compared to that of 210 for the Pentium system. While this is only one benchmark it does at least partially corroborate Cyrix's claim of 30 percent more performance per clock cycle compared to the Pentium.

Cyrix is in the process of shrinking the 6x86 from a three-layer 0.6 micron process to a more economical five-layer 0.5 micron process to be manufactured by IBM. This will allow Cyrix to ramp the 6x86's clock from 100 MHz to 120 MHz initially. By late 1996 Cyrix should have 133 MHz, and possibly 150 MHz, 6x86's available in volume shipments.

If independent benchmarking reveals that the 6x86 can perform according to Cyrix's expectations the 6x86 will be a popular Pentium alternative. The Pentium Pro's poor 16-bit performance will be to Cyrix's advantage as they will have a window of opportunity throughout 1996 while the industry shifts to a 32 bit standard.

NexGen

A relative newcomer to the microprocessor market NexGen has the unique distinction of having been the first to deliver a true Pentium-class processor back in mid 1994. NexGen is far ahead of competitors AMD and Cyrix in delivering a true 6th generation processor. Currently NexGen offers processors that offer roughly the same performance as equivalent Pentium systems. In fact on November 13 NexGen announced 120 and 133 MHz versions of the Nx586 family manufactured on a five layer 0.44 micron process.

The Nx586 processors implement 16K data and instruction caches. Other than the Nx586 PF100 all NexGen processors require separate Nx587 coprocessors to handle floating-point intensive calculations.

All NexGen processors require a custom designed motherboard as they are not Pentium-pin compatible. NexGen claims that their P133 is between 20 to 50 percent faster than the Pentium depending on the benchmark. Using Ziff-Davis' CPUmark32 as a benchmark the Nx586 P133 scores 248 against their claimed Pentium benchmark of 210. However Intel's benchmark of a 133 MHz Dell XPS P133 delivers 278. Using Norton's SI32 NexGen reports a score of 37.6 versus Intel's report of 34.2 on the Dell system.

As with the Cyrix 6x86 the Nx586 seems to be roughly comparable with the Pentium on a clock-for-clock basis and NexGen's claims of a 20 to 50 percent performance advantage are not corroborated by available benchmark data.

Notwithstanding the benchmark data, the Nx586 series are positioned well from a price/performance standpoint against Intel's Pentium offerings.

NexGen's forthcoming Nx686 will be perhaps the only real competitor to the Pentium Pro when it ships in mid-1996. The Nx686 will be manufactured on a five-layer 0.35 micron process and will initially be clocked at 180 MHz, with faster versions becoming available as the manufacturing process matures.

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The chip has a 16K L1 instruction cache and a huge 32K data cache NexGen estimates that the Nx686 will execute 32 bit code as much as 33 percent faster than a similarly clocked Pentium Pro For 16 bit code the Nx686 is estimated to be twice as fast! Even if the Nx686 only equals the Pentium Pro on a clock for-clock basis, the Nx686 will have both a price advantage and a performance advantage when running 16-bit code In addition the Nx686 will be far less expensive than a comparable Pentium Pro allowing it to reach desktop level price points almost a full year before Intel

If NexGen can meet their planned schedule, they will have the distinction of having the fastest processor available for Windows 95 applications for a period of several months Despite its Pentium incompatible pin out the Nx686 will be one hot product

Last October AMD acquired NexGen in an all stock transaction with NexGen operating as a wholly owned subsidiary The Nx686 will ultimately be marketed as the AMD K6 microprocessor AMD has ceased activity on its own sixth generation design project The K6 microprocessor will be manufactured on a 0 35 micron process at AMD's new Fab 25 in Austin Texas

Of Marketing and Manufacturing Microprocessors

Both AMD and Cyrix are attempting to position their Am586 and 5x86 (M1sc) microprocessors against Intel's Pentium line and their K5 and 6x86 (M1) processors against Intel's Pentium Pro Clearly both companies are trying to market their respective offerings by leveraging them against Intel's Pentium brand name

I was in a computer superstore a few days ago and overheard a salesperson pitching a Cyrix 75 MHz 5x86-based system to a customer telling him that "the 75 MHz 5x86 offers performance equivalent to that of a 75 MHz Pentium " At 100 MHz (a 120 MHz variant will be available in early 1996) the 5x86 delivers roughly 85 percent of the performance of a 75 MHz Pentium So the salesperson was clearly misinformed! Expect this kind of marketing mayhem to escalate in 1996 as more system manufacturers integrate these products at their low end

Based on performance data both the 133 MHz Am586 and the 120 MHz Cyrix 5x86 would be better classed as 486 processors as they deliver the performance one would expect from a 486 running at 120+ MHz clock-speeds In addition like Intel's Pentium OverDrive processor they are 486-pin compatible and have a 32 bit I/O bus unlike that of a Pentium's 64 bit internal/external data bus

The Am586 and 5x86 are 32-bit designs that are pin-compatible with a 486 It would be fairer to say that the Am 586 and 5x86 are 4th generation CPUs as they offer less performance than a Pentium OverDrive processor per clock-cycle but slightly more than a 486 Expect the Am586 and 5x86 to be popular in the notebook market as they offer better price/performance than entry level Pentium based notebook offerings

The K5 and the 6x86 probably offer slightly better than Pentium performance at the same clock speed Both companies claim a 30 percent improvement but these claims have yet to be independently verified

When a "586" offers slightly better than 486 performance and a 686 offers slightly better than Pentium performance clearly there will be a need for more performance-based comparisons. A potential customer can no longer determine "expected" performance based on either a processor's clock-speed or generation. These traditional benchmarks have, for the most part, been rendered hopelessly irrelevant

Another item of interest is the ability to manufacture these microprocessors. The fabrication facilities in which they are created often called *fabs* are extremely expensive A 0 35 micron fab can cost a couple of billion dollars far beyond the reach of most processor manufacturers In fact only AMD has their own fab both Cyrix and NexGen are fabless manufacturers. They must rely on another company — in their cases IBM Intel on the other hand owns several fabs Several of these are capable of state-of-the art 0 35 micron lithography and could easily out produce all of AMD Cyrix and NexGen, perhaps by an order of magnitude

Looking Forward

In mid 1995 Pentium sales began overtaking 486 sales for the first time Expect this trend to escalate in 1996 as the Pentium is expected to make up the lion's share of the market with a whopping 70-plus-percent of the projected market share

The Pentium Pro will likely begin cutting into the Pentium's market in mid 1997 and be a mainstream product in 1998 shortly after the introduction of Intel's forthcoming P7 If AMD Cyrix and NexGen are successful in offering competitive alternatives expect this trend towards sixth generation processors to accelerate ❑

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New Music Software Scores High

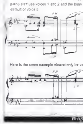
BY GRAEME BENNETT

Products tested
Twelve Tone Systems CakeWalk for Windows 3.0
Cubase Score for Windows 2.0
Cubase Score for Mac 2.0
Cubasis Audio for Windows
Passport Rhapsody for Windows

Right off the bat let me say all of the above mentioned products are at such a high level of sophistication and elegance that it has been a delight to test them. I've been using music scoring software practically since day one when the Passport MusicWriter system and the Alf synthesizer were big news on the then new Apple IIe series computers. I've followed notation software wherever the road took me to the Apple II the early leader in notation programs the Commodore 64 with Electronic Arts Music Construction Set and scoring titles from Passport Designs (Musicshop) and Access Software (Music Master). None of these titles supported real time input of music by the way. Then not long after the creation of the first MIDI specification in 1983 real time input became possible with the release of the first versions of Jim Miller's Personal Composer. It's fairly safe to say that all of these early music writing titles were awful.

By the mid-eighties with MIDI catching on and the Atari ST computers making a splash in MIDI circles a whole new generation of notation titles emerged. Electronic Arts Deluxe Music Construction Set and Mark of the Unicorn's Composer for the Macintosh Easy Score from Hybrid Arts and Sonus Superscore software on the Atari (there were plenty of others of course including The Copyist from Dr. T's Music Software and a program called Encore from that old timer Passport). The Amiga had Deluxe Music Construction Set (*TCP* even ran an article I wrote on how to improve its printouts!) and titles from Dr. T. Even a low end title from Commodore itself. There were of course plenty of other music programs that didn't print sheet music including one for the Atari ST from a small German company that had previously had some success with a MIDI sequencer package for the C64. Its Atari program was called Pro24 and although it didn't print music version 2.0 of this program caught my eye because you could play music into the sequencer and watch it translate into on-screen sheet music almost instantaneously. Of course you couldn't print it but... Hmmmm.

The PC and the Mac were both catching on with professional musicians and scoring titles soon appeared that threatened to leave the best Atari and Amiga titles in the dust. On the PC numerous programs appeared including a title called Musicator that showed considerable promise Score which I found appallingly awkward to use and a title called MusicWriter (apparently a popular name). Personal Composer still a popular title despite its author's losing battle with cancer continued to develop and Passport released Encore on the Mac Atari and for Windows. Other leading programs on the Mac included MOTU's Composer and Electronic Arts DMCS 2.0. A DOS based sequencing (only) program called CakeWalk was gathering market-share too.



Here is the same example of cross staff beaming viewed for all voices. The beamed notes in the treble clef of the piano staff use voices 1 and 2 and the bass clef uses the default of voice 5

Here is the same example viewed only for voice one

Passport Rhapsody

By the late eighties new titles emerged that took computer-assisted scoring to a new level of sophistication. The best known of these was — and is — Coda Music Software's Finale a behemoth of a program legendary for both its complexity and its exotic capabilities. Originally released on the Mac a Windows version as well as a low-end spin off called MusicProse soon appeared. But despite these developments many musicians — myself included — went out and bought an Atari Mega ST (OK you can stop laughing now). Why? There were a couple of programs that were available on the Atari that were unmatched in many people's eyes (including this author's own) in terms of providing an integrated scoring and sequencing environment. The two programs were C-Lab Notator and Steinberg Cubase. I was an early fan of Notator, but eventually found that I liked Cubase's graphical interface design more and settled on this title as my top pick.

Naturally early versions of all of these titles had their share of problems. Cubase couldn't output PostScript to disk, and didn't support the de facto standard Sonata notation font. Likewise Notator didn't support PostScript. But both of these titles shared one amazing feature: you could play music on an attached MIDI keyboard and the software would — accurately! — transcribe the MIDI information into pretty decent looking sheet music, more or less instantly. It may not sound like much to you but...

Fast Forward to 1995

Cubase is now available in several different versions ranging from inexpensive entry level versions to full blown audio workstation packages that support sequencing (Cubasis supports sequencing and basic scoring) pro-level scoring (Cubase Score 2.0) and integrated digital audio recording (Cubase Audio at the high end, and a low-end title called Cubasis Audio).

C-Lab's software developers went to work for a company called Emagic and Notator evolved into a program called Logic. Like Cubase Logic split into a low-end version (MicroLogic) a sequencer/notation combo (Logic) and a version with integrated audio support (Logic Audio).

CakeWalk 3.0 now supports printing and is a fairly formidable sequencer. Passport's Encore is still a leading title on the Mac and Windows (the Atari version was quietly dropped) and has been joined by a low-end (under $100) package called MusicTime and the US$249 middle-child Rhapsody.

I've tested all of the titles mentioned in this article and nearly all of them have their merits but the Passport offerings and the programs in the Cubase series are my favorites. Rhapsody (and its siblings) is the easiest way to create good looking sheet music. It's amazingly good at whipping a MIDI file or real-time performance into a passable score.

Compared to the others, the Rhapsody score took less time to produce, and looked better.

Unfortunately Rhapsody was not without its problems. Running version 1.0.1 on Windows 95 (final version) I found that Rhapsody crashed 100 percent of the time after a save operation. Fortunately the song was saved, but the program quit, reporting a

Continued on page **82**

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FIRST LOOK

Pentium Pro: The New Leader of the Pack

BY GRAEME BENNETT

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From: Fastech
Price: Approx $8 500 as tested with 32 MB RAM, ATI Mach64 graphics card and 4.28 Gigabyte SCSI hard drive

We recently tested the fastest PC we've seen yet — a CompuCon Pentium Pro (yes!) system from Vancouver-based Fastech. Although there's more than a grain of truth in the observation that initial versions of the Pentium Pro will quickly be superseded by faster chips (faster versions are just around the corner — so what else is new?) the fact remains: if you are running 32-bit apps and a 32-bit operating system such as Windows NT or OS/2, the Pentium Pro will deliver performance that significantly outshines that of today's fastest Pentium chips.

Despite some articles we've seen in other mags complaining that the Pentium Pro is not all that much faster than a Pentium, we found the performance to be dazzling. Although we've tested Alpha-based RISC workstations that offered superior number-crunching power, there's something to be said for the fact that the Pentium Pro does not need to rely on any kind of X86 emulation to run existing software designed for Intel CPUs.

Although its performance isn't significantly better than that of a Pentium when running 16-bit apps, we think that the market will quickly move toward 32-bit operating systems and applications in the next few years. When running 32-bit Windows applications — the kind of PC software packages the average user can find with increasing regularity on the shelves of his or her local software store — the Pentium Pro proved to be a stellar performer.

Subjectively, it feels much, much faster than our Power Macintosh 7100 and 8100s, and benchmarks confirm this.

A PowerMac 7100 with 40 megabytes of RAM took 247 seconds to create a PDF file with Acrobat Distiller. The Pentium Pro took 12 seconds.

In real world tasks, the system proved to be slightly less awesome than these numbers might indicate. Intel and its vendors are careful to mention that the Pentium Pro is designed to be used in 32-bit operating systems with 32-bit applications. In other words, it isn't particularly efficient at running 16-bit ➤

Our test system clocked in at 150 MHz, sporting 32 MB of RAM, NT 3.51 and a very fast PCI SCSI hard drive. The Pentium Pro processor's 150MHz floating point calculation is almost 2.5 times faster than that of the Pentium 133 MHz CPU.

The system we looked at was based on an Asus P6P4S PCI motherboard, incorporating the new Intel Orion chipset. Our test unit was equipped with an ATI Mach64 video card — for overall compatibility and performance, one of the best choices in high performance video cards, and an internal NEC 6x CD ROM.

Our test machine had a Quantum 4.28GB SCSI hard drive (controlled by a Buslogic PCI SCSI controller) which unfortunately proved to be quite noisy, with a high-pitched whine. However, its performance was very good, with 8.6ms access, a 512K cache and a spindle rotation speed of 7200rpm. According to Fastech, which supplied the system, such noise levels are typical for high capacity, high speed drives. Our test unit's configuration would retail for around $8500.

Recommendation

If — and only if — you use Windows NT or OS/2, and primarily run 32-bit performance-intensive applications, the Pentium Pro is the right choice. Windows 95, because of its 16-bit roots, doesn't take as much advantage of the Pentium Pro as we had hoped, and the Pentium Pro is clearly not optimized for running 16-bit DOS or Windows apps. We expect the next version of Windows NT (currently known as "Cairo") to be the 32-bit platform of choice for many of the users that are today using — or are considering upgrading to — Windows 95. Almost everyone who uses NT agrees, whether you like Microsoft or not, NT is rock solid.

Hopefully the market will, in the next few years, move away from its current focus on 16-bit Windows, and the Pentium Pro and its successors will really shine. Today, the power of the Pentium Pro and Windows NT is best exploited in CPU (or multi-CPU) intensive tasks such as digital imaging, desktop publishing, CAD, network services, serious number crunching and so on. Fortunately, great software for all of these tasks is available today and, as always, the best reason to consider any computer investment is for the capabilities it affords us.

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Pentium Pro

Continued from page 81

applications or operating systems. This includes Windows 95, which Microsoft has revealed contains more 16-bit code than the company first let on.

We tested several different 32-bit applications on the unit, and for good measure some 16-bit titles as well. In other words there is little benefit to the faster CPU when running DOS or Windows 3.x programs, and in some cases they actually run slower than they do on a Pentium-class machine. Our tests showed an average speed of 1.07 times the speed of a 133MHz Pentium when running Win95. Running NT improved the PPro's real-world performance to about 1.5 times that of a P133.

As you may have heard, the Pentium Pro uses a feature known as Predictive Branching to attempt to preload instructions it determines are going to be executed next. Unfortunately, the Pentium Pro only makes good predictions during the execution of programs based on 32-bit code. Thus we focused the majority of our attention on 32-bit apps such as Photoshop 3.0, Picture Publisher 4.0 for NT, Calamus 1.5 for Windows NT and Microsoft Office for NT.

Windows NT runs most programs designed for Windows 95, although the visual look of apps running under current NT releases is similar to the way they look under Win3.x.

(As an aside, we discovered that Microsoft has "sidegrade" pricing for upgrading to Win95 version from NT versions that are very inexpensive.)

Calamus proved to be quite similar to — but of course significantly faster than — the SL version that was popular on the Atari ST and TT platform during the late 80s. Nathan Potechin of Canada-based Ditek, explained that the program was ported to NT to maximize the speed that made the Atari version so highly regarded. ❑

New Music Software

Continued from page 80

GPF "Error in KRNL386" other times, it reported a GPF error in RHAPSODY.EXE.

Save as MIDI worked fine. I also noted that subsequent installations of the program failed with a message that an error had occurred during font installation. Apparently, this is a Windows 95-specific problem.

I found Passport tech support impossible to reach, despite our attempts at e-mail, fax and voice-call contact. I must have tried to call them fifty times without getting through. Often, the phone would just ring and ring — not a good sign. Passport tech support rating: terrible.

All the other MIDI software titles worked perfectly. Although there must be bugs, I couldn't find any in CakeWalk 3.0 or Cubase Score 2.0. I tested the programs on a system with 16MB RAM, Windows 95, and the Plus! pack. I also tested the low-end Cubasis title on a 486/50 with 8MB RAM.

Despite the company's appalling tech support, and the Win95 compatibility problems, which I presume will be addressed in an upcoming revision, I'd have to give top marks for scoring. Rhapsody and the other Passport scoring programs. These programs fared extremely well in ease-of-use evaluations. I scarcely needed to look at the manual.

For sequencing and editing, we found Cubase to be the most capable and, for basic cut-and-paste editing, the easiest to use, although CakeWalk was not far behind. Given the differences in price, it's practically a toss-up. Our vote for best sequencer/scoring combo: Cubase.

For MIDI playback and general MIDI support, I found CakeWalk to be the best. I managed to create a couple of files with Cubase that proved difficult for that program to edit the program and controller changes in, but CakeWalk handled them with aplomb. Despite the fact that CakeWalk feels somewhat more primitive than Cubase, Logic or the Passport offerings, its MIDI prowess and ease of use is right up there.

For "goodies," I would have to pick Cubase Score 2.0 throws in a number of extras that were previously extra-cost add-ons, such as a module that creates automatic accompaniments, another that helps manage patches on a number of leading synths, and more.

I also enjoyed Cubasis Audio, which comes with a CD-ROM of "Clip-audio," that went a long way toward alleviating my major complaint with computer audio recorders. Despite the fact that I have, over the years, built up a fairly snazzy home studio, I haven't yet talked my wife into turning the dining room into a soundproof room where I can keep my PC, so that the microphones don't pick up the whir of the fan and hard drive during audio recording. There's a project for next year. ❑

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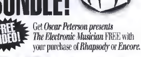

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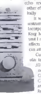
The first "Surround Sound" phenomenon my uh grandfather remembers was the Quadrophonic sound that was the hit of the audiophile set in the early seventies. For better or worse, multiphonic sound never really caught on in the home market, and is now relegated to theatres, live music concerts and the dens of a few Teac 3340S owners that prize their beloved reel-to-reel units.



A few years later Roland came out with an innovative device called, if memory serves me correctly, the Dimension D. It took an audio signal and moved various parts of the audio spectrum into different areas in the stereo field, creating what might be best termed "panoramic sound." (Roland currently markets a similar audio spatialization device targeted at pro musicians.)

Other companies, such as Aphex, were also known, at least in the world of professional musicians, for similar devices that produced various forms of aural excitement. By the late seventies, electronic musicians were well used to the idea of advanced signal processing, and no synthesizer or guitar hero's setup was complete without the obligatory rack of reverb, chorus and equalization units.

Nowhere was the transition from the analog world to the brave new digital world more evident than in the field of music. Roland was — and continues to be — a pioneer in the area, with the first synthesizers to sport digitally controlled oscillators, which easily proved their superiority over the older analog voltage controlled oscillators. As the idea of digital signal processing caught on in the early eighties, the development of the MIDI (musical instrument digital interface) specification was instrumental, if you'll pardon the phrase, in bringing music and computers together in more powerful ways than ever before.

Where, for example, a "seventies" signal processing setup might have included a "Space Echo" unit consisting of a large box containing a spring reverb and a looping tape echo machine, the eighties equivalent was a digital signal processor (DSP), with delay, echo, reverb, flanging, and many other effects all accomplished digitally.

It wasn't long before musical instruments themselves began to incorporate digital effects. The Korg M1 keyboard was the first unit I recall seeing with on board effects. It sold, as music retailers can attest, in vast numbers.

Currently there are two popular technologies for producing 3D audio: the QSound technology developed by Archer Communications, a Calgary-based company, and the SRS (Sound Retrieval System) technology from SRS Labs. Although both technologies process the sound of the original audio signal in a similar way, each adds a distinctive "color" of its own. To our ears, the computer based implementations of SRS are a little more impressive sounding, although the QSound seems to "color" the signal less. Perhaps because of this, QSound is popular with recording artists, and has appeared on a number of best selling albums, including Sting's *The Soul Cages* and Roger Waters' *Amused to Death*. As you might expect from a former Pink Floyd member, the Waters album is a real showpiece for the 3D effects of QSound.

➤

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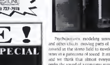
How does it work? Both technologies employ psychoacoustic modeling to break up a stereo or mono signal so that the different parts of the audio spectrum are distributed in a stereo field in a way that is similar to the way the human ear naturally hears sound. For example, because of the way our ears are shaped, we hear sounds less brightly when they are behind us due to the shape of the outer ear.



Psychoacoustic modeling simulates this, and other effects, moving parts of the signal around in the stereo field to envelop the listener in a panorama of sound. It really works, and we think that almost everyone would prefer the sound of a computer game through a 3D audio enhancer, as compared to a non-enhanced signal.

To quote the Vivid3D speaker manual, "you have only two ears, yet you hear in three dimensions. SRS is based on a natural psychoacoustic phenomenon known as Head Related Transfer Functions or HRTFs that allow your brain to localize sound because the spectral characteristics or frequency response of the sound varies depending on the direction. These spatial cues, supplied primarily by the outer ear, or pinna, are transferred to the brain enabling you to position sounds very accurately in three-dimensional space. SRS technology essentially mimics these diffractive effects of the pinna." (It goes on, but hopefully you get the idea.)

According to NuReality's Jan Schrieber, the SRS system is particularly effective when processing audio signals with a considerable amount of ambient information. In other words, Enya is never going to sound better.

The only problem, according to David Kelin of White Line Location Recording Ltd. of Vancouver, B.C., is that this phenomena of the pinna transfer function only works for one spot in the center of your loudspeakers. For everyone else not on the center line, the signal usually sounds so strangely equalized it's obscene.

"Good, perhaps, for a special effect," maintains Kelin, "but not for regular use in a track, though excellent technology perhaps for a single user/computer game situation, or a VR application with headphones."

"For overall music surround," says Kelin, "I'll still vote for Dolby — especially with the available discrete rear surround channels."

***

The ConcertMaster Multimedia Keyboard provides a QWERTY keyboard with the addition of Windows95 command keys (a la the Microsoft Natural Keyboard) with an interesting addition: 3D audio capabilities. It has an audio amp, 3D spatial effects processor — using the SRS technology — and speakers (albeit fairly cheap-sounding ones) built-in. The SRS enhancement provides a subtle but pleasing improvement over the audio from standard speaker and amplification systems.

Because of the small speakers, the sound quality isn't that great, but the system might be a good choice for users who want audio controls literally at their fingertips. The mute button is a nice touch, and might prove appropriate for educational applications — say, a multimedia lab at a school.

The ConcertMaster also has a volume control and a tiny microphone built-in. Ports on the side allow the connection of an external mic, headphones and even a subwoofer, which we did not test but would expect to improve the audio impact substantially.

We would rather have seen the ConcertMaster's internal speakers be detachable, much as the speakers on ghetto blasters can be separated. Being less than a foot apart as they are on this keyboard, the 3D audio doesn't have as much impact as it should. Nevertheless, with a street price around $170, this is an inexpensive way to get a Win95-enhanced keyboard and audio all in one. The ConcertMaster Multimedia Keyboard is available at the Future Shop and other retailers and is distributed by wholesaler NMS Precision Inc. (905-890-9279 or 604-990-0889)

We'd have to give NuReality top marks for "out-of-box experience." The audio cables that ship with the company's products are very high quality with gold-plated ends and heavy wire; the Vivid3D Speakers are attractive black powered speakers that incorporate the SRS 3D spatialization enhancement system and a pair of good sounding speakers. With a price tag under US$200, these are a very good value, and our recommended "multimedia PC speakers."

Like the company's Pro ex add-on for existing speaker systems, these units have a number of controls: volume, stereo/mono/bypass, a "center" command,

Continued on page 88

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Video Editor Review

BY GRAEME BENNETT

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in:sync Razor Pro 2.0 (US$799 from in:sync 1-800-864-7272)
Avid VideoShop 3.0.2 (US$395 from Avid 1-800-949-AVID)

Although Premiere is widely considered to be the leader in both Mac- and PC-based digital video editors, it must be said that prior to version 4, we had always found it to be a bit clumsy feeling. However, with version 4.x (at press time, 4.0 is the newest Windows release while the Mac version is at 4.2) Adobe has smoothed a lot of the rough edges and come up with a program that fits smoothly in with our work requirements.

For example, here are some tasks we needed to do, and how we accomplished them with Premiere.

Situation: using Virtual Reality Labs VistaPro, we had created 100 PCX files of different views of a 3D model. We needed to assemble them into an animated flyby.

Solution: Using Premiere, we used the Import Directory feature, followed by Make Movie, done.

Situation: using Adobe Photoshop, we created several images comprising graphics and text, which we wanted to assemble into a short, looping demonstration.

Solution: we assembled the stills using the Import files command, followed by Make Movie, as above.

Situation: We created a QuickTime movie using a 3D rendering program (Infini-D 3.0 on the Mac) and needed to convert it to AVI format, to embed on a Microsoft Internet Explorer Web page.

Solution: Premiere reads and writes both QuickTime and AVI.

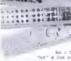
Situation: We needed to output an AVI movie to Photoshop for "rotoscoping" — to paint a special effect laser beam on each frame of the movie.

Solution: We output the AVI file as a Filmstrip, imported this into Photoshop, applied our effect, and imported the file back into Premiere for output as a movie.

As you can see, we found Premiere useful for a number of tasks outside the usual "moviemaking" arena. Around *The Computer Paper*, Premiere and Photoshop are used for a wide variety of multimedia, CD-ROM, video and Internet related tasks.

Razor Pro

It is probably safe to say that in:sync's Razor Pro is not as powerful a program overall, but



it has a better "feel," at least to our taste. Razor Pro's greatest strength is its relative ease at creating complex and/or artistic "transition" effects between scenes. Although Premiere has the ability to perform multi-layered transition effects, these are quite difficult and time consuming to assemble. With Razor Pro, it's extremely easy and the results look great. We found Razor Pro's performance to be acceptable on our test system: a 90MHz Pentium with 16MB RAM "doubled" to 32MB with the help of Syncronys Software's SoftRAM. The company recommends a minimum of 20MB of "real" RAM.

We tested both Avid VideoShop and Premiere on both 68K and PowerPC based Macintoshes. In addition, we tested the Windows version of Premiere on the above mentioned PC.

We successfully ran Premiere on a 40MHz 68030-based Mac IIfx with 8MB of RAM, but we wouldn't recommend it. Both VideoShop and Premiere warned us to turn off virtual memory every time we attempted to launch the respective programs with RAM Doubler enabled. VideoShop also warned us that having File Sharing enabled would slow us down. Score two for VideoShop and one for

Continued on page 88

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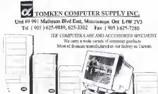

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Video Editor Review

Continued from page ***85***

Premiere On the PC, Razor Pro did not seem to notice — or benefit from — SoftRAM at all

Premiere proved to be much more responsive on our 33MHz 68040-based Quadra 700 with 20MB RAM, and improved significantly again on our PowerMac 6100 with 40MB of RAM

VideoShop claims to be able to run a Mac with as little as 4 MB of RAM (yeah right) We didn't test that, but it was a lot more responsive than Premiere on our 8MB IIfx VideoShop would be a good choice for schools or other users who want to get into digital video without selling the farm

We also tested Avid's TransJammer effects a series of plug ins for Videoshop Premiere and other programs that accept Premiere plug ins We were delighted to see that TransJammer has built a series of effects that bear more than a passing resemblance to many of the niftiest transitions from the Newtek Video Toaster Now Premiere and Videoshop users too can have the silhouette of Kiki Stockhammer — or someone who sure looks a lot like her — scooting about in between your video clips

Each TransJammer package (vol 1 and 2 are available for $59 each) contains 100 transition effects mostly built with Avid's Elastic Reality morphing technology

Both VideoShop and Premiere 4 2 include Specular International's excellent LogoMotion "flying logo" animation utility As LogoMotion normally retails for US$179, this adds significant value to these packages The utility which is also the basis of Corel's 3D Motion component of CorelDraw 6 0 is in turn based on Infini D one of the leading 3D packages for the Macintosh Clearly Specular is really on a licensing binge these days For more info on LogoMotion and Infini D see *TCP*, October 95

Coming Up .

in.sync spokesperson Trish Nauden says the company is currently putting the finishing touches on its high end editor for Windows NT dubbed Speed Razor Mach 3 The $1499 program (and we thought she said "high end") runs on Intel Alpha or PowerPC based NT systems and according to the company allows you to edit full-screen 60 field per-second broadcast-quality compressed or uncompressed video and supports resolutions of up to 4000x4000

Conclusions

Best effects Premiere, Razor Pro
Best Interface VideoShop, Premiere
Best features. Premiere
Best Value VideoShop, Premiere

3D Audio

Continued from page ***84***

which can bring out or reduce the emphasis of a vocalist in a stereo mix (try this on Springsteen's *Born to Run* — it's quite amazing!) and a "Space" command that increases or decreases the 3D effect You might find that the SRS effect muddies certain recordings particularly commercial CDs with a lot of drums The bypass button allows the units to be used as regularly powered speakers

For sheer sound quality however, the NuReality speakers did not fare as well as our Altec Lansing ACS52 powered speakers. The tweeter on the ACS52s produced brighter highs and the bass response was better, too With the 3D sound-enhancing feature of the Vivid 3D speakers turned off the A-L units were clearly superior although, when the 3D audio feature was turned on we preferred the sound of the NuReality speakers. The Altec-Lansing units have connectors on the back for an optional subwoofer inputs for two sound sources (unfortunately the volume is not independently controllable; you'll need an external mixer if you need to do this) and a headphone jack. The best of all worlds was to have the ACS52s and the NuReality Pro ex connected.

Some sound cards have 3D audio capabilities, too Older versions of the Ultrasound series of sound cards from Burnaby BC-based Gravis employed QSound technology, although the company stopped shipping the QSound software early in 1995 due to licensing problems

Creative Lab's SoundBlaster AWE32 and AWE-upgradable models also support QSound. We tested the QSound output of an AWE32 under Windows 3 1 (it is not yet supported under Windows 95), but frankly we preferred the sound with the (non-QSound) chorus and reverb settings enabled instead. Our testers generally agreed that the QSound output was a bit muffled sounding and lacked a certain "sparkle" present in the non-QSound original

Our tests suggest that QSound is better suited to audio recording than computer multimedia playback and that SRS is currently the best choice in 3D audio enhancements for computer multimedia. ❑

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Writer's Block Meets Writer's Edge

BY MARTIN P WATERMAN

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Not too long ago I reviewed a brainstorming software package called IdeaFisher It appealed to a wide range of users but mainly those working in government the military and big business Now IdeaFisher has developed a new product that is focused primarily on creative writing and hence its name Writer's Edge

According to the company Writer's Edge is designed for anyone then who wants to improve creative writing skills The program's mission is to do for writers what IdeaFisher does for big business corporate planners decision makers and large organizations Writer's Edge is especially honed for those who may be composing a book school paper screenplay article or even just a simple business or personal letter

Unlike a thesaurus, which allows a writer to study a selection of words, Writer's Edge allows you to choose from over 1 5 million linked entries consisting of words, phrases and concepts. While a thesaurus offers synonyms Writer's Edge is able to offer similes metaphors, aphorisms homonyms and oxymorons

Using Writer's Edge

I use WordPerfect 6 1 and found that Writer's Edge installs so that the program can be accessed from the Tools menu along with the standard grammar spelling and thesaurus items Other Windows word processors that have tools menu compatibility include Microsoft Word 2 0 and 6 0x WordPerfect 6 0 and 6.1 and Lotus AmiPro 3 1 You do not have to install the program on a word processor and set up gives you the option of a stand alone program group

The program comes with adequate online help and before long you will be bombarded with substitute words and concepts For example there are 672 ways to say red and 1,200 different ways to say love

After studying 1 200 ways to say love you may find that you have spent at least half an hour studying and running different scenarios with your sentence At that rate your novel or love letter could take a millennium to finish In other words while Writer's Edge does work, in practice if you find you don't have the time to use a thesaurus then this program won't pay its rent on your hard drive On the other hand if you need to write that all important proposal letter resume or short story and need to add depth by exploring hundreds of ideas then Writer's Edge will serve you well

This is particularly true if you tend to work alone Brainstorming products by design strive to give the same results as if you were in a room with a bunch of people brainstorming in order to get a wide spectrum of ideas However when you are alone you lack the ability to bounce ideas of your friends and associates Even if you are surrounded by people there may be resistance to brainstorming with others lest they get the idea you that are bankrupt when it comes to your own ideas

The program is lean on resources and will run on a 386 with 2 MB of RAM and only takes up 5 MB of hard disk space Of course a little more muscle is recommended

The box includes the program on both CD ROM and 3 5 inch disks and there is a Macintosh version available ❑

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Creativity in Practice

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3 Descriptors afraid, agitated (disturbed), always on the go animated (lively), antsy anxious, apprehensive ashamed, bashful calm, cool, and collected, camera-shy, can't sit still, clumsy compulsive, contorted, coy distant (aloof), edgy (and hundreds of other ideas and phrases)

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Your Computer's Date with Destiny

BY VERN EPP

The year 2000 is approximately 1 460 days away, but it is already creating concerns for anyone that has to work on or manage computers and data. Most software and hardware use the last two digits of the date for recording the year, and therein lies the problem. How do you make changes so that the date system is valid for the year 2000 and beyond but still compatible with the years up to 2000?

My PC Too?

Try this simple test with your personal computer. Set the computer clock at Dec 31 1999 23 55 00. Now turn off the computer and wait for 10 minutes before turning on. Now check the results. My computer comes up with Jan 1 1980. Survey information conducted by the Peter de Jager Group in Ontario indicated that 95 percent of all the PCs tested failed. My own limited test indicated that most 486 or lower computers would not meet the YR2K (Year 2000) test. The Macs I tested passed the test. Of the Pentiums tested approximately 50 percent passed the test.

The Big Headache

It's not just personal computers that are affected, the big mainframes are also millenium-challenged. It has been estimated that it will cost the US Government US$10-25 billion to update computer systems so they correctly change to the year 2000 and produce the correct leap year information. The New York Stock Exchange has spent over US$30 million to update its software and hardware in preparation for the year 2000. It's been estimated that costs could reach over $100 million to complete the job — and they have less than four years to do it.

How Old Did You Say You Were?

Some of the obvious problems are in date-related calculations. A bank wants to make sure that interest is being charged on your loan after the year 2000.

If you were born in 1960 and ask a computer how old you are today it subtracts 60 from 96 and announces that you are 35 years old. What happens in the year 2000? The computer subtracts 60 from 00 and you become minus-60 years old. An insurance company might now give you an excellent rate for life insurance.

It has been found that some credit cards which expire in the year 2000 or after are being rejected. The year 2000 was being read as the year 1900. Recently VISA announced a new expiration date standard. It says that, effective January 1996 all transactions must be capable of processing dates past the year 2000.

Among personal productivity applications spreadsheet programs would be quite vulnerable. Earlier versions of programs like Microsoft Money and Quicken have had some problems.

As was previously noted large corporations are busy coming up with a fix. For PC users one solution has been developed for DOS and Windows personal computers (not including NT). A shareware program called "YEAR2000 EXE" is put into the autoexec bat file which corrects the problem in most DOS and Windows machines.

Peter de Jager has tried to make people aware of the consequences and presently has a web page on the Internet available to users. The address is http //www year2000 com/ IBM recently added a Year 2000 page to their Home Page on the Internet. Its address is http //www.software ibm com

Anyone interested can join a news group where ideas are exchanged. By sending an e mail message to listmanager @hookup net with the text SUBSCRIBE YEAR2000 in the body of the message ❑

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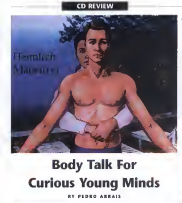

Body Talk For Curious Young Minds

BY PEDRO ARRAIS

A.D.A.M. Introduces Family Titles

What causes headaches? How do you perform the Hemlich Manenver? How can you prepare a child for a coming sibling?

The human body is a fascinating topic. We all have one and we all have wondered one time or another why our bodies do what they do. As parents, we may not always have the answers for inquisitive young minds.

Salvation may come by way of A.D.A.M. Software. A.D.A.M. stands for Animated Dissection of Anatomy for Medicine and the company got its start by producing multimedia software for professional/academic studies. The good news is that it now has three titles for family use: ADAM, The Inside Story, The Nine Month Miracle, and Life's Greatest Mysteries.

ADAM, The Inside Story has been around for a while, but has stood the test of time. It helps the non-professional unlock the secrets of the human body with tour guides, Adam and Eve.

Family Scrapbook is a wonderfully humorous and enlightening journey of the human anatomy. In it you will discover — through four hours of animated stories — why your body reacts the way it does. The program takes care to explain concepts in simple terms that children can relate to. If you desire, the Full Anatomy screen can be chosen and the body can be viewed front or back, male or female. (Fig leaves on the bodies can be left on or removed by parents.)

The Nine Month Miracle is, as the title suggests, all about pregnancy and birth. It features incredible in body photographs of the stages in a pregnancy as well as animations to explain the whole process. Parents can select a modesty setting to prevent access to some screens or scenes.

Of note is the bonus chapter addressing the feelings of pregnancy through the eyes of a seven year old girl waiting for a new sibling. This chapter touches on subjects such as jealousy, guilt and curiosity. The authors try to answer questions such as how genetics would determine hair color and which parent determines the sex of the baby. The program features 32 animations, 17 videos, four games, a dictionary and a reference text. Adam and Eve will be your guides in this program too, or you can explore on your own. An excellent program for anyone expecting or thinking of it.

Life's Greatest Mysteries is designed to answer some questions your youngster may have about his or her body. The program touches on four topics: body, curiosities, mind and sickness. The 41 questions are all answered with the help of lavishly presented animations and excellent graphics. Difficult answers are presented in a clear and simple way for children to easily follow. The program has a modesty setting like The Nine Month Miracle so that parents may lock out questions that they deem inappropriate for their children.

The only oversight was the inability of printing even the text summaries of questions for reports or projects. Also, after the 41 questions are answered, there is little else to explore in the program.

In terms of depth, the other two titles from ADAM are superior, but the saving grace here may be the program's ability to hold the child's attention long enough so that they ask more questions.

All the titles are on CD ROM only with a 486 and 8 MB machine recommended. Mac versions are also available. Street prices are about $55 each. ❑

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John Dvorak Opines

BY FRANK GARCIA

John Dvorak is a multi talented columnist, radio broadcaster and author whose knowledge, style and wit graces many different facets of media.

Currently Dvorak writes Inside Track for *PC Magazine*, Ask Dvorak for *The San Francisco Examiner* and *The Vancouver Sun*, The Back End for *DEC Professional* and the Devil's Advocate for *MacUser*. He also writes for *PC Computing* and *Microtimes*.

He's written for many other publications such as *Newsweek*, *Time-Life*, and *The Los Angeles Times* and has appeared on the Larry King Show five times.

When I interviewed him, it did not surprise me to find he had an opinion on everything.

"What does it mean to people to know that Microsoft has this or that scheme up their sleeve? For example, the Windows 95 hype. Having sold one million copies within a week, the first week of the product, you're going to wonder if it's going to be successful. They say they've spent two hundred million in marketing. [But] advertising agencies estimated Microsoft spending seven hundred million in marketing and more recently now it's one billion. They can't possibly make a nickel off this product! So, obviously it's market share that's concerning everyone."

On a related topic, Dvorak recalls being in Redmond, Washington that day in August during Bill Gates' international launching of the product. In a satellite broadcast kickoff, Tonight Show host Jay Leno helped keep the atmosphere lively and entertaining.

"It was fun for a while, but overall it was corny," says Dvorak. "They didn't have any bands. It wasn't much of a party atmosphere. Leno was really the only entertainment and I was extremely disappointed.

"But, keep in mind the amount of publicity they had. They had a giant banner from the CN Tower in Toronto, the first time anyone has managed to accomplish that! In England, they bought all the copies of the *London Times* for one day.

"They'll improve the product over time. But, it's kind of a nightmare for the service people," quips Dvorak.

For those who wonder about such things, Dvorak talks easily about the equipment he uses in the course of his trade. "I use a Macintosh to produce documents, but most of my writing is done on a 133-mhz Pentium. It's got 32 MB of RAM with a 3 gigabyte hard disk on a 20" monitor.

"I use a public domain word processor. It works under DOS called VDE. I also use Q-Edit. I use an old-fashioned batch-style spell checker called MicroSpell [a defunct product], which is the best spell checker that's ever been produced to date. It's one of those things that never made the transition.

"I use [Microsoft] Word occasionally when I have to print something out. Most of my stuff is done electronically in ASCII in VDE."

Dvorak has written seven books, including *Dvorak's Guide to PC Telecommunications*, *Dvorak's Guide to DOS and PC Performance*, *Inside Track to the Mac* and *Dvorak's Crash Course and PC Survival Guide* (a book for beginners). Guidebooks for PC Games, OS/2 and Connectivity are also on his bookshelf. Editing *PC Magazine*'s annual Buyer's Guide was also what kept him busy between 1992 to 1994.

"I'm working on a new edition of the telecommunications book," says Dvorak. "A virtual online bible that's 1,400 pages which will get you on every service. It will be the only book you need to get onto the Internet, America Online, Compuserve, or whatever. It'll cover everything. It'll help you jump around, try AOL for 10 hours, Compuserve and then the Internet in different ways. We assume you want to know everything. It's not like a word processor where you don't jump around from one to another so much. People with a modem tend to go from product to product, service to service, bulletin boards and the Web. We cover everything."

Asked what are the most pressing issues in the computing industry today, Dvorak replies with some quick one liners, "Will Intel hold on to its leadership position forever? Can IBM make a comeback? Will PowerPC ever show up any place other than a Macintosh? What's most overlooked is digital video disks technology and how that will affect personal computing."

Picking up his Apple Quicktake camera, Dvorak points to it and cites digital photogra

Continued on page 99

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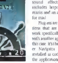
Netscape Unveils Navigator 2.0

BY FRANK GARCIA

Netscape Communications is like a lightning rod Millions of eyes in the computing-technology industry, as well as those of internet users are turned towards the Mountain View, California company Their Netscape browser has an installed base of 75 percent of users on the Internet's World Wide Web, after less than two years.



The lightning rod metaphor is clear when you consider August, 9, 1995 when the company made their initial public offering at the Stock Market Shares were traded at $75 during the first hour settling down to about $58 at the end of the day, with approximately 13.8 million shares changing hands Netscape made history as the third-best performing initial public offering ever

As this story goes to press Netscape has just released the latest edition of their flagship product Netscape Navigator 2.0 This version incorporates some advancements and opens the door to a dizzying array of new technologies that expand the World Wide Web landscape The most significant of these advancements include new HTML writing standards, and a technology called "Frames" which allows for sections of a Web page to be displayed and manipulated independently of each other

The ability to add plug-ins will allow third-party developers to bring their propriety technologies to the Navigator and help transform the way we interact with each other.

"A lot of people are excited about the features " says Jon Mittelhauser Netscape's Project Engineer, on the release of Navigator 2.0's first Beta

"It's great to have millions of Beta testers because it helps us identify the problems very quickly We can't test against every Web site. There's tens of thousands of them and thousands of them going up daily We can't hit every PC configuration The numbers just get too astronomical for us to test it all Getting it into user's hands who have a variety of setups enables us to find where the problems are "

To encourage the use of a Beta level release Netscape opened an innovative feature at their home page which crosses beta testing and marketing The Netscape Bugs Bounty contest ran for the duration of the beta testing period and offered awards of Netscape T-shirts or coffee mugs if users could locate previously unknown severe bugs that were reproducible by company programmers Awards were also offered for security bugs

"I thought it was a great idea when I heard it? I can't take credit for it but, it's good because it gets people motivated to use the product and find bugs," says Mittelhauser "We're extremely interested in finding any problems with security That's why there are very large rewards for finding those. As a result, our products undergo a much more intensive security review than any other product that's out there "

New Plug In Technology

The enhancements being installed in Navigator 2.0 are numerous They include mail and news readers improved security multiple font colors and type styles non-scrolling watermark backgrounds, inline AVI movies background sound effects It also includes improved bookmarks and an address book for mail

Plug-ins are tiny applications that are designed to work specifically in concert with another application. In this case it's the Web browser Navigator Plug ins are installed as code directly in the application and remain dormant until an appropriate page arrives. The plug-in then does its work until the page disappears.

Mittelhauser reports that there are approximately 10 000 companies who signed up for the developer's program to design plug ins

"We've tried to do them in a much more general powerful way Let's take embedding AVIs for example " he says "Microsoft [Explorer 2.0 Web browser] has done this facility where you can embed an AVI movie within a document

"Navigator 2.0 has this facility where you can embed anything within a document It's a plug in facility In the next Beta we'll ship a plug-in that does AVIs Just as an example plug-in Our Windows client will embed AVIs just as [Microsoft] does

"Basically we allow the ability to embed anything very simply We're extending the application beyond plug-ins We think that's a much better solution than simply the ability to invent one arbitrary format "

Essentially Netscape has decided that in order to grow a plug in capability within the browser as opposed to the addition of gigantic codes as part of the program itself is the best solution

"We have a general purpose scripting solution called Live Script It lets you do almost anything you can think of including a set of arbitrary things at the beginning of a page when you load it when you leave it. Those things can include playing an audio clip You can say When you go to this page load and play this audio clip but you can also say, When you click on this radio button load and play "

Some of the other major companies involved in developing plug-ins include Adobe Apple Computers Collabra Macromedia Paper Software and Sun Microsystems.

"People have already announced embedded VRML [Virtual Reality Markup Language] Real Audio and QuickTime, QuickTime VR, AVIs, MPEGs, Adobe PDFs and Macromedia Director," says Mittelhauser

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Adobe has Acrobat, a PDF [Portable Document Format] plug-in which will allow for rich text and graphics to be viewed exactly as they were created directly within Navigator while you're online to the Web. Plus the free WebLink extension will allow users to bounce directly to a URL that is identified within a PDF document that is viewed by Netscape.

Apple is working towards incorporating their Quicktime movies and Quicktime VR modules to be viewed within Netscape. These will introduce a richer multimedia content such as 3D images, sound and video clips.

Macromedia will provide Shockwave as a plug-in. This, too, will provide rich multimedia material to be played within Netscape. Shockwave is the networking name for Macromedia's Director player.

Paper Software's WebFX module will allow for VRML 3D images to be viewed directly within Netscape.

Sun Microsystems' propriety technology HotJava is developed as a plug-in to be known as Java applets. These are tiny applications that engage the browser to activate live animation scripts or receive real-time data pushed through the servers and directly to the computer. Coding Java applets is not as easy or as friendly as HTML, and creating them may be confined to a small circle of programmers.

"What Java lets you do is much more interactive with documents. Live documents instead of static documents," notes Mittelhauser. "It basically allows you to embed live applications within a document in a safe, networked way so you can go to say a financial page and see live stock graphs constantly updating. I can go and change and add new things to the graphs. It has all that information being pulled across the network."

All of these technologies, of course, remain dependent on the speed and power of computers and modems.

Plug-ins work very efficiently. "Unless I run across a page that requires the plug-in, they're never loaded into memory. As soon as I run across a page that has an inline PDF I load the PDF plug-in. When I leave that page and that page gets flushed from my memory, the plug-in goes away as well. You're only using memory that you need."

Mittelhauser warns that each company has their own release schedules for plug-ins but he expects announcements to follow quickly after 2.0's availability. "Most are targeting their cycle to be roughly the same as ours," he says. "We're working with them closely but each one is going to have a different cycle. Some you'll see go to beta right away."

Netscape has no current plans to alter the policy of making their products available by downloading from their FTP sites. "Basically until we see a reason to change it, we won't. Right now we're very happy with how everything is working," remarks Mittelhauser.

Navigator 2.0 is also available commercially for $49 U.S. It comes with tech support.

Affectionately dubbed "Mozilla," after the company's lizard mascot, the Navigator browser may even become available via CD-ROM from any number of distributors including Netscape itself.

Netscape is also releasing Navigator Gold 2.0 which is an HTML editor in addition to being a browser. It will retail for $79 U.S.

Early Days

Jon Mittelhauser discovered very early in the game that moving fast is the norm of the computing industry. Today he is one of five programmers working at Netscape with colleagues Eric Bina, Rob McCool, Aleks Totic and Chris Houck, who were all students at the University of Illinois. There, at the National Center for Supercomputing Applications (NCSA) with pal Marc Andreessen, Mosaic was invented in the spring of 1993.

"Netscape is a company that has gone from nowhere to the top of the Internet world in less than 18 months. It is like standing atop a shifting sand dune — the view is great, but the footing is insecure and there are other players on all sides eager to help you slip off. Netscape continues to innovate and partner aggressively, but will their growing pains and obligations to an installed base hold them back? It is too soon to call one way or another."

PAUL SAFFO, Director of Institute for the Future, Menlo Park, California. Keynote Speaker at Write 95, Granville Island, June, 1995

"Netscape is a lesson in exponentials"

NICHOLAS NEGROPONTE, Director of the M.I.T. Media Laboratory, columnist for Wired Magazine and author of 'Being Digital.'

"Netscape is an extremely interesting company in a variety of ways. They went one better on Mosaic to become the standard Web browser but undermined the standards-based nature of the Web and the Internet in the process. In addition, their IPO [initial public offering] was astonishing, especially based on the fact that they had barely made any money at all. Netscape is definitely a modern company and is full of the contradictions of the present time."

ADAM C. ENGST, author of the "Internet Starter Kit" series and publisher of the electronic newsletter TidBITS

"We came up with this cool idea," says Mittelhauser. "Marc had the original idea for Mosaic and was working with Eric Bina. Then people like Aleks Totic, myself and Rob McCool saw this and said, 'That's cool!' and started working on it."

In charge of the Windows version of the app, with others looking after the Macintosh version, it was an exciting time for all of them, says Mittelhauser. But after Marc graduated and left for silicon valley, things changed.

"By that time we [had] released a version, and people on the 'Net started to use it," remembers Mittelhauser. "It grew to a million or two users and people started to take notice. All of a sudden, in a university setting, a bureaucracy started to grow. People started to stick their fingers into it."

Andreessen stayed in touch with his pals. Netscape's current CEO Jim Clark encouraged them to hurry up with their theses and graduate because Andreessen wanted them in California.

"Most of us were ecstatically happy," Mittelhauser says excitedly. "We had talked about starting a company to do what we were doing, but, do it over and do it right. We sort of talked about it jokingly because none of us had any experience in doing that stuff. Luckily Marc ran into Jim and Jim obviously had great experience in doing that. Things just came together. Marc and Jim flew out and that was the first hint of Netscape time.

"They were going to fly out for two weeks and meet with us and fly back and send us offer letters and then all of a sudden it was like, 'We're going to be there tomorrow.' This was Tuesday and they flew out Wednesday. Wednesday night we signed and Thursday we basically resigned. That was the first hint how fast things were going to start to move!"

Mozilla's Future

Looming ahead for the company are a num

ber of challenges. They are competing in a fierce market that includes the Microsoft Corporation, which has a Web browser of their own design being used in the Microsoft Network. The browser, Microsoft Explorer 2.0, is an advanced browser that many see as another entry in an increasingly crowded field of Web browsers. We've already got Mosaic and its assorted varieties from NCSA, Spyglass and others. Plus Tradewave (formerly EINet Galaxy) is transforming MacWeb and WinWeb into a commercial product.

Mittelhauser looks to Explorer 2.0 as a worthy competitor. "I think the current Microsoft Explorer is a very good product. It's the first product other than Netscape that I've seen that, if Netscape wasn't there, that I would use," he says. "But, Netscape is there and the fact is that Explorer 2.0 is the level of our shipping product Navigator 1.2. But it's nowhere near as powerful as 2.0."

As a result of Netscape's remarkably speedy growth since its founding in April, 1994, many press and industry watchers are looking to the company as the next contender to meet Microsoft's punch.

"The problem with that is that most people who are taking that comparison are taking the negative connotations about Microsoft," he says. "There's a very different basis of our business. Our business is based on open standards. We offer source codes in many cases. We're really the first company to try and do this.

"We're simply trying to produce the best software in this field. There's no barriers to stop anyone else from producing the same software. What we have to do is what we're talking about, the speed and innovation, that sort of thing.

"People say we want to be the Microsoft of the 'Net. And we're not. That's not fair because of the negative connotations that go along with that. We want to be the premier software company for the 'Net."

In computing columnist John Dvorak's eyes, Netscape supposedly has a hidden agenda of creating a networking operating system with Navigator. Responding to this suggestion, Mittelhauser was not very surprised.

"I think in some ways it's a very good analogy, but in others it breaks down," he notes. "We're definitely presenting a platform upon which Internet applications can be based. That's how it's very operating system like. That doesn't mean we're trying to compete with operating systems. We still need to run on top of an operating system."

Also facing Netscape in the years to come is the evolving and quickening pace of the Internet. To be competitive, Netscape must constantly reinvent technology and introduce new paradigms. In fact, the company has been criticized for doing just that with their unilateral decision to implement HTML 3.0 standards in their Web browser (ver. 1.1) ahead of the international consortium which is in charge of making these standards.

The move is controversial because it creates a disparity of "Netscape-enhanced" Web pages versus those which are not.

"We've said all along that we will support whatever standards get adopted," says Mittelhauser. "We may support a super-set of that, but we'll definitely support what gets adopted. It's basically a case that we won't and can't afford to wait for it. Other companies aren't going to wait for it. And if we sit around, we'll get crushed."

Pulling out a crystal ball, Mittelhauser provides some personal views of the ways he sees the Internet changing. "The first is that you'll see lots of media types being supported. You're going to start seeing video, audio and multimedia become more common. As hardware advances increase, you're going to see cable modems to the home and more companies pushing high speed ISDN phone lines and other solutions. As we increase the bandwidth, we'll push the capabilities of the media. Meanwhile you'll begin to see more sophistication of the pages and documents and that's where you get into application things like Java that you see alive rather than static pages. They're pages you interact with.

"You're going to continue to see explosive growth of the content that's available. I think by the end of the century — in four years — every piece of information in the world is going to be on the 'Net.' There's no reason why it won't be.

"It's moving so incredibly fast. The Yellow Pages are on the 'Net now. Every company I want to look at is on the 'Net. It's not going to be that long before just about anything you want to know you're going to be able to find! Then, we start running into that problem. How do you find it? That becomes a problem.

"If you have information, there's no reason not to link it in." ❑

"I found our new house on the Internet with Netscape. How could we have done that a few years ago?"

GUY KAWASAKI, Apple Fellow

"It's getting out of control. I think where we're going is the Netscape strategists are intending to produce a networking operating system at some point. I think this is their long term strategy. They're trying to keep it a secret."

JOHN C. DVORAK, Computing Columnist, *PC Magazine*, *MacUser Magazine*

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Digital Pizza And Other Web Home Brews

BY JAMES MACFARLANE

You've probably seen some of the really neat things people have done with their Web pages. HTML offers a lot of possibilities but there are a lot of other things that you can do with your Web page that are even cooler, like building Web-based applications. It's not as hard as you think.

When you want an outside application to interact with your Web page, you use something called a CGI script. CGI stands for Common Gateway Interface, and it's simply a method for passing data to and from an external application.

Visitor Counter

One of the most common CGI applications is a visitor counter. You've probably seen one on someone's page, bragging about how many visitors they've had. How it works is simple. Instead of having a pointer to a GIF in their home page, they have a pointer to a program.

When the page is called up, the user's HTTP server automatically runs the program instead of displaying something. The program then fills in the blank.

In the case of a counter, it has a file which keeps track of how many people have hit the page so far. It then adds one to it. It also has a bunch of GIFs on hand, numbered 0 to 9. It looks at the number and then adds in the corresponding GIFs to where the blank is. That's all it does. Simple.

Guest book

Another popular CGI script is a guest book. A guest book works a little differently. Instead of displaying something, it grabs information from a form and stores it in a file. When you create the form, each text field has a name. The CGI script simply treats these as variables when it runs, allowing you to do whatever you want with the data. In this case it just saves it to a file, but it could do something much more complex.

Bigger applications

If you've ever used any of the Internet search engines, such as Webcrawler or Lycos, you're using a CGI script, except this one links to a database and performs a search based on information you typed on a form. Many applications are using this technique for creating online catalogs, real estate databases, and even games.

The really fun stuff

I remember way back when I first got into computing. There were a lot of cute programs people wrote just to show off and have some fun. There were things like fortune tellers, story generators, board games and the like. These sorts of programs weren't terribly difficult to write but they were a great way to learn how to program. Some of them even pushed the limits of technology at the time.

Now it seems CGI scripts on people's Web pages are at the same stage. It's the hacker ethic at work again, doing something creative that shows off your talent just for the fun of it. Here are some examples.

Sandwich Server: I wrote a little CGI script that's a lot of fun. My girlfriend Trista and I have this running joke about really gross

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sandwiches in the middle of a conversation one of us will randomly make up some disgusting combination of ingredients for a sandwich, like whip cream and sardines with mustard Icky stuff huh?

Anyway one night we decided to make a program that did the same thing We sat down together and put a list of ingredients into the program Then we had it assemble them randomly in a sentence Then we pizzazzed it up with some graphics The result is *James and Trista's Sandwich Server* If you've got a bottle of gravol on hand, check it out at http://oce.com/cgi-bin/james/sandwich.cgi

The program is pretty simple If you want the source code (in PERL) just write me (james@oce.com)

Even Stranger Things

Sometimes people will create CGI scripts just to outdo the other guy This can have some simply fascinating and funny results One of my favorites is the Internet Pizza Server (http://www2.ecst.csuchico.edu/~pizza/)

This is probably the world's first non-calorie pizza, because it's completely digital Forget 30 minutes to your door or free this one is delivered almost instantly — over the Net

The program assembles the toppings you choose and merges them with a GIF of pizza dough for a delightful GIF pizza you can view on your screen There are some zany choices for toppings I got mine with mushrooms and kittens

If you ever want to baffle the public relations department of an organization you love there's always the Complaint Letter Generator (http://www.csag.cs.uiuc.edu/individual/pakin/complaint) This Web application will insert the name of your choice into a randomly generated complaint letter It's different every time

Here's my complaint, as generated by the server: *Mr Complaint about Mr P Walking to class at that terrible early hour do you ever say to yourself "Mr P has let his self-centered feelings obscure reality?" Well I do too For starters the cliches P practices are well known to us all Some revolting bureaucrats don't have a clue Which brings me to my point I mean his sadistic self deceiving practices are a shout to the world that some day he will threaten the American family P seems completely incapable of understanding that he gives new meaning to the word "wild"*

On a more baffling note there's the Surrealist Compliment Generator (http://pharmdec.wustl.edu/cgi-bin/jardin_scripts/SCG) where digital dadaists can compose and archive some of their most bizarre contributions to the 'Net. One compliment is chosen randomly every time you reload the page Here are a few dandy examples

Your toehair's blossom is like the resulting fertile crop planted with the enteric seeds shed from a thousand shaven camels

Ever so slightly, you remind me of a staircase falling exotically into a sea of spilled macaroni

The quietness of a manhole cover cannot compare with the wild vapors of nylon I sense in your larynx

The Most Impressive

If you go to The Asylum (http://www.galcit.caltech.edu/~ta/cgi-bin/asylhome-ta) you'll be treated to some of the best Web hacks the world has ever seen They've got a few noteworthy items to check out one being a Lite Brite simulator and the other being a Web-based drawing program

The Lite Brite simulator works just like the children's toy You have a grid where you plug

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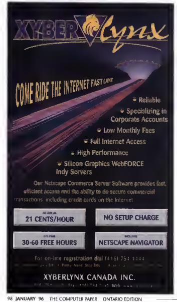

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su multicolored pegs to create a picture except this one is all mouse-driven and you can add your masterpiece to their online gallery It's a house of fun for low-resolution artists

But what is really impressive is their drawing program There is a canvas which acts as a collaborative workspace for everyone visiting the site You can add lines circles boxes, text and even specify the URL to a GIF that you want to paste on the canvas. Your contribution, along with those of numerous others, is instantly on display

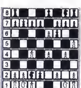
What really blows my mind is that they've added the ability to edit right down to the pixel level You can zoom in and click on the grid to draw pixel by pixel

This is a web hack supreme It's rather awkward to use, because of the way HTML needs to refresh the data but within the limitations it is really amazing.

HONORABLE MENTIONS

Chess Server

(http //www willamette edu/~tjones/chessmain html) Yes you can now play chess with other people on the Web or simply stand around and watch other games in progress The graphics aren t great, but it's usable



Houston Traffic Map

(http //herman tamu edu/traffic html) The City of Houston Texas has hooked up sensors on the city area highways to monitor traffic speeds. Information about accidents and congestion can be quickly fed to the authorities Even better, you can get it too A real-time color-coded map displays trouble spots. Go see for yourself

Repeat Appeal

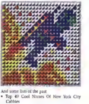
While many of the CGI scripts are fun most of them are fun only once or twice. A really successful CGI script has to have something that keeps people coming back. One of the places I like to frequently visit is Downtown Digital's Keepers of the Lists (http.//www dtd.com/keepers/keepers.cgi?topall)

Every day a new list topic is posted and visitors are asked to contribute items for the list Visitor can also vote for other people's postings so the rank on the list changes constantly

Here's an example of the list posted the last time I visited the site

Top reasons why IBM should buy Apple

- There would finally be a blue fruit.
- IBM can finally have a worthwhile OS
- To teach Apple that a second mouse button is needed
- So they can put OS/2 on Newton



And some lists of the past

- Top 49 Cool Names Of New York City Cabbies
- Top 77 Coolest New High Tech Products You Have To Have
- Top 87 Ways To Make Golf Exciting
- Top 77 Signs You Are A Frat Guy
- Top 66 Names For The Generation After Generation X
- Top 80 People Who Should Never Bear Children
- Always entertaining and worth a daily visit

How To Do It Yourself

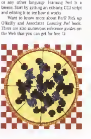
There are dozens of CGI scripts that are in the public domain that perform things like visitor counters and guest books All you need to do is get a copy for yourself and follow the included instructions on how to make it work. You don't even need to know how to program

A good place to start looking for CGI scripts is the Yahoo index, under the topic Computers and Internet:Internet:World Wide Web CGI – Common Gateway Interface There are plenty of examples for almost every machine

If you want to create your own, CGI scripts can be written in a variety of languages. The language you choose must be supported by the operating system that runs the Web server Most often this means Unix, although there are Web servers for almost every operating system (I write most of mine in Visual Basic for Windows)

You can write your CGI script and run it on your Internet provider's machine The easiest way to do this is using a language called Perl If you've ever written a program in Basic or any other language learning Perl is a breeze. Start by getting an existing CGI script and editing it to see how it works

Want to know more about Perl? Pick up O'Reilly and Associates *Learning Perl* book. There are also numerous reference guides on the Web that you can get for free ❑



Electronic Shopping Mall Arrives

BY JEAN READ

ManGlobe Virtual Corp a Winnipeg based company plans to go online in 1996 with a new electronic shopping mall The company has three major partners the Royal Bank Canada Post, and the Manitoba Telephone System

As well as offering service to Canadian customers, ManGlobe hopes to span the globe with 20 marketing partners around the world. Customers who use the shopping mall will be assigned a personal identification number so that each time they log on, the service will recognize them and will have their address, phone number etc available

Customers logging on from other countries will be able to read product descriptions in their own language, see prices listed in their own currency, and obtain telephone assistance from an operator in their own language.

Customers logging on from other countries will be able to read product descriptions in their own language see prices listed in their own currency, and obtain telephone assistance from an operator in their own language When the service begins, it will provide information in English French, Spanish and Japanese

"Canada Post has partnered with us and will be able to handle product distribution and customs and duty clearance from any point in the world to any point in the world" explains Tracey de Leeuw, CEO of ManGlobe "The Royal Bank is also a partner of ours and is able to clear financial transactions for us credit card and debit card transactions, and business transactions Manitoba Telephone System is providing us with all our telecommunications requirements in addition to our Internet access "

Catalogue companies as well as companies such as Bowrings and K-Tel, have signed up to join the mall ManGlobe will earn its money from the arrangement by processing transactions and providing services

"The Internet represents a vehicle where businesses could do a significant transaction volume " says de Leeuw "but it also represents a very much unknown entity "

ManGlobe is "attempting to build a commercial exchange so that small medium and large corporations don t need to each incur the cost of setting up a transaction processing engine to support their efforts on the Internet. We hope to be a turnkey solution By that I mean beyond just providing the electronic service of putting the business up and managing their site online, but also the reporting that gives them the inside information to the marketplace Who are their customers? What are their customer profiles?"

de Leeuw said that, after some unsuccessful trial partnerships, ManGlobe now has the right chemistry "Canada Post and the Royal Bank both have well-established marketing campaigns direct mail campaigns and — collectively — probably represent all businesses in Canada Most businesses are a client of either the Royal Bank or Canada Post at some stage So using those channels to get to businesses and to customers will be part of our marketing strategy "

As to the security concerns of customers who will have to divulge credit card numbers online de Leeuw said "One of the reasons that the Royal Bank has partnered with us [is that] they are also very security conscious " She said financial transaction information would not be maintained by ManGlobe, but by the bank itself

de Leeuw said ManGlobe will focus its services about 75 percent on business-to-business and 25 percent on retailer-to-consumer transactions, with the consumer service being developed first.❑

Contact WWW mangl0be.com email Tracey @ manglable com

John Dvorjak Opines

Continued from page ***92***

phy as a burgeoning commodity "Filmless cameras are going to be unbelievably hot "

When it comes to companies such as Netscape Dvorak makes a startling observation. After reviewing the fact that Netscape has joined in numerous alliances with Adobe, Apple Computers, Collabra, Macromedia, and Sun Microsystems to incorporate proprietary technology into their Navigator browser, Dvorak says, "It s getting out of control. I think where we re going is the Netscape strategists are intending to produce a networking operating system at some point. I think this is their long-term strategy They're trying to keep it a secret "

This observation lends credence to the increasingly frequent references by industry observers comparing Netscape with Microsoft Dvorak says his statement is merely a deduction on his part and whether it is good or bad news he doesn't know But Dvorak says that Netscape is definitely one of the most dangerous of all the Silicon Valley companies

Overlooked or unappreciated technology says Dvorak are the three newly announced PCI Apple Macintoshes I think they re outstanding pieces of equipment but the publicity for them isn t really that up to par " says Dvorak. "People don't understand that PCI in Macs are a significant change or important No one's paying any attention to this " ❑

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Simpsons Fan Goes Too Far

BY FRANK GARCIA

20th Century Fox Television cried "Foul!" when they learned that Gary Goldberg, a die-hard fan of the animated Fox TV hit series *The Simpsons*, had assembled a very extensive Web site on the Internet devoted to the popular series.

How big is extensive? At its peak, the Simpsons Archive had 110 Quicktime/MPEG movies hundreds of images and sounds, promotional materials, datafiles and trivia

"I had an open door policy," says Goldberg "Anything that anyone wanted to contribute was added, and I would give full credit for the submission "

Denizens of the *alt tv simpsons* newsgroup were staunch contributors and assisted Goldberg in co-maintaining the site.

Gary Goldberg who lives in Bowie, Maryland and runs a computer consulting firm had started building the elaborate Web page devoted to *The Simpsons* in July, 1994

"I started DigiMark [the Web server] in order to host the Simpsons Archive " remarks Goldberg "But DigiMark was growing, and I was becoming increasingly concerned that DigiMark was at real risk legally from the growing amount of copyrighted information stored I started to feel like I couldn t feel good about what we were doing unless we had some type of approval for it "

Goldberg opened dialog with Fox Television to avail them of this new resource, and discuss the possibilities of becoming a sanctioned, official site

The Simpsons publicist was receptive and helpful says Goldberg She recommended that he write and fax a letter Along with the fax Goldberg added a copy of a 1994 *Philadelphia Inquirer* article discussing the site the first five pages of the *alt tv simpsons* FAQ, a photocopy of a 1994 *Entertainment Weekly* article indicating the Simpsons Archive as one of the five top Web sites of 1994 as well as the front page of the Archive

"As an offer of good faith I removed access to all the copyrighted materials temporarily, with the message that we were negotiating with Fox over the possible expansion and official blessing on the site, says Goldberg This was in May 1995

In his letter to Fox TV Goldberg tried to say what he believed were all the right things to gain Fox's official blessing

"I was pretty excited at this point and I was positively bubbly to the other maintainers," Goldberg explains. "In my note I had offered the free and complete resources of DigiMark to design and maintain an offical site that would incorporate press releases biographical information, interviews as well as question/answer feedback with the Simpsons production staff and pointers to other Fox shows and fan materials "

The feedback from his proposal was not what Goldberg expected "I didn't receive any response for a week." When Goldberg followed up the publicist was "completely frigid in her manner and said that I would be receiving a cease-and-desist letter from the Fox legal group " says Goldberg

But the letter never arrived

Today the Simpsons Archive still exists and runs at http //www digimark.net/ but on a less grand scale

The bulk of the copyrighted material (Quicktime/MPEGs, photos etc) has been removed

In the immediate aftermath of the incident Goldberg recalls that there was a lot of heated discussion between the members of the *alt tv simpsons* newsgroup The Simpsons

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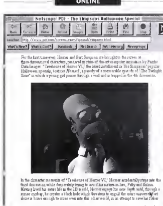
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For the first time ever, Homer and Bart Simpson are brought to the screen as three-dimensional characters, rendered in state-of-the-art computer animation by Pacific Data Images. "Treehouse of Horror VI," the latest installment in The Simpsons' popular Halloween specials, features *Homer3*, a parody of a memorable episode of "The Twilight Zone" in which a young girl passes through a wall and is trapped in the 4th dimension.

In the climactic moments of "Treehouse of Horror VI," Homer accidentally steps into the third dimension while desperately trying to avoid his sisters-in-law, Patty and Selma. Having lived his entire life in the 2D world, Homer enjoys his new depth until, through a minor mishap, he creates a black hole which threatens to engulf the entire universe. Bart alone is brave enough to cross over into this other world, in an attempt to save his father.

According to The

Archive continues to be popular with online users but Goldberg sighs that it's all information and no style.

"We maintain a list of alternate Simpsons Web pages on the site, in a continuing attempt to be comprehensive," says Goldberg. "Many of them have copyrighted materials including much of the stuff we used to have. For the most part, they seem unconcerned about the potential for suit."

"We forwarded all the information we had on what happened to the Electronic Freedom Foundation and I'm sure they filed them away, but their position was that it was copyrighted material. They didn't address the issue of fan support."

The Simpsons Archive is not the only extensive and elaborate dedication to a favorite show or film property by fans. There continue to be sites available on the Web today aimed at viewers of Melrose Place, The X Files and other shows.

Goldberg's thoughts about the issues he confronted deal with the role of the fan. How far can fans go to express their appreciation of entertainment? Armed with new technological tools, may fans use them as a form of expression?

"I have a lot of respect for the power of the copyrights, and the rights of the creators to determine what happens to their material, but I still have a central point which I feel has not been addressed," says Goldberg.

"A production company develops a program for both business reasons (profit, advertising, etc) and for the entertainment of its viewers. When a program is successful as *The Simpsons* is, there is an unspoken but clear offer inviting the viewers to come into the program universe, get comfortable with the characters, the plot and the world portrayed, and to make themselves at home.

"Fox needs to recognize the fan's activities as legitimate, regardless of whether they fit into antiquated copyright laws. If they suppress it, they will drive the fan activities underground and squelch enthusiasm for the program simultaneously."❑

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And The Winner Is... Hi-Tech Culture

BY FRANK GARCIA

Last year, Discovery Channel gave television viewers the rare opportunity to speak their minds and change the course of television programming. Five one-hour pilot programs devoted to computers and information technology were produced and aired. Viewers were asked which of the five programs they liked best and would like to see as an on-going series. Airing under the banner of *Cyberwars*, Hi-Tech Culture was the people's choice.

Thirteen one-hour shows began airing on Discovery Channel on October 5 at 6:30 p.m. and were rerun later that night at 10:30 p.m.

HTC competed against four other innovative shows, *Cybersurfer*, *Binary Groove*, *Chipheads*, and *EScape Velocity*, produced by companies across Canada.

"Each of the five pilots was a fascinating examination of the wired world," says John Panikkar, the channel's Director of Programming. "In our audience analysis, the Vancouver-based production was clearly and convincingly well-accepted. Especially by Internet users, particularly in the areas of issues covered and depth of stories."

With over 7,000 responses, HTC had "nearly twice the audience numbers of any other Cyberwars pilot," Panikkar says.

Brian Hamilton, Executive Producer of Hi-Tech Culture, says "I made two bets. Bet #1 was that Discovery was going to get a license. Bet #2 was that they would like the program idea for Hi-Tech Culture. I and my colleague, Terry McEvoy, and associate producer Gabriela Schonbach, decided to produce a demo."

Hamilton's timing was impeccable. On the day that Discovery got their license in an announcement in Banff, Alberta, he was in the wings prepared to talk to Trina McQueen, the President of Discovery Channel.

"Trina was on stage, surrounded by reporters," recalls Hamilton. "But the first person who congratulated her, who was not from the media [was me]. We talked about the demo. It then transpired that the other four companies had already been in touch with her or came on later."

Although he has a background as a computer systems engineer, Hamilton is qualified as a series producer. In Toronto, he worked as a staff producer in a production company that examined technological innovations in public transit, banking, and satellite communications.

"We started out with the notion that Hi-Tech Culture is not simply a technology show," explains Hamilton. "It's a show about people and how technology affects the way we live. When we were given the opportunity to produce the pilot, we set out to find stories about regular folks whose lives were changed by technology in some way.

"How does technology impact people in business? We followed some entrepreneurs who were trying to make their first CD ROM and hoping to get into the market.

"How does it affect education? We looked at a school that uses technology in an innovative way.

"In any of our six areas, we chose a wide topic, but started from a particular human story."

With new host Kathleen Duborg, Hamilton reveals that the series will have a greater exploration of what the pilot offered.

"The pilot achieved a lot of what we set out to do. But of course, the series will be a lot better," grins Hamilton. "There were a number of things we wanted to explore further in the pilot and now we have that opportunity.

"Each of the subjects we touched on, we could only do seven minutes. Now we're incorporating some of the ideas we ran across in the series. The way the show is put together is now more streamlined and, I think, more polished."

The polishing that Hamilton describes can be attributed to viewer feedback. "We received mail from 11 year-olds and 80-year-olds and everyone in between. We got comments like 'This is the smartest, hippest program I've seen on the air in a long time. Keep doing it!' We also got 'This program doesn't interest me at all,' and requests for more technical content. 'Why don't you show me how the computer works?'

"We hope our program will still be relevant two, three years down the road—if not here in Canada, somewhere else in the world. The issues we take on cannot be issues of temporary interest."

The goal, says Hamilton, is for HTC to act as a stimulating catalyst for discussion and as an exploration of thought provoking issues.

"Hopefully people will watch our show and debate about whether something is good or bad. That they will find out about some things they didn't know," says Hamilton. "What we are doing is showing some of the marvelous and some of the scary things that come out of the use of technology."

Some of the stories in upcoming segments of Hi-Tech Culture include "an investigation of what sin in cyberspace is. We talk to different religious representatives on the Net," remarks Hamilton. "We look at how animation is being changed by technology, comparing the old style way of drawing animation with the new style of computer rendered animation."

Here, Hamilton refers to a segment that spotlights the Vancouver-based animated series ReBoot.

Other segments include a look at "special effects and how Hollywood is using technology," says Hamilton. "We look at museums being changed by technology. How photography is being changed by digitization."

"I hope that people will come away from watching the shows and develop opinions or think about issues we've raised and decide for themselves. We want to present a more complex situation than just 'Here's the way it is.' We try to inject some humor into our presentation because we all learn best as we're being entertained. I hope response will be such that Discovery will renew us again and again because we have a lot more topics we'd like to address!"

To keep up with Hi-Tech Culture, point your web browser to their site at: http://giant.mindlink.net/htc ❑

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Bell Sygma Launches Major Internet Service

BY JEFF EVANS

Sympatico Network Rolls Out In Four Major Cities, Rest Of Canada To Follow

Bell Global Solutions a division of Bell Sygma Inc has announced a new Internet service called Sympatico At a packed press conference at the Hockey Hall Of Fame at BCE Place in Toronto on November 29 Bell Sygma reps said the service is intended to appeal to mainstream computer using Canadians, many of whom are interested in getting on the Info Highway but wary of the complexity and sometimes erratic service and reliability of small pioneering Internet service providers

Bell Sygma will offer the Sympatico service immediately in Toronto Ottawa/Hull, Montreal and Quebec City and will "aggressively" roll the service out to the rest of the country in the months to come

Are You Regular?

There will be a three tiered cost structure. Occasional hookup will cost $9 95/month with five prepaid hours and $1 50/hour for additional connect time A regular rate will be $24 95/month with 25 prepaid hours and $0 95/hour additional The frequent option will cost $39 95/month with 50 prepaid hours and $0 75/hour additional.

Come Home To Me

According to Lih Gibson, vice-president of marketing of WorldLinx Telecommunications Inc. market surveys indicated the Bell name offers a significant comfort factor to prospective subscribers "We believe Sympatico is a breakthrough service that delivers what has been missing in the [ISP] marketplace It will be widely available through quality retail outlets It's easy to install and comfortable to use. It offers reliability performance and support from an organization that Canadians know and trust We expect Sympatico will become the preferred service in a highly competitive market place "

E-Commerce 'R Us

Sympatico startup kits are available at a variety of retail outlets including Toys 'R Us, Future Shop, Compucentre and Bell Phone Centres A representative from Toys R Us said that the toy chain is currently carrying a fairly wide assortment of kids' entertainment software and that going to the next level — selling online entertainment and educational services — is a logical evolution

What You Get

The Sympatico Web home page was demo-ed, and *TCP* tried it out at the launch. Basically Sympatico seems to have devoted considerable time and thought to making the user interface friendly simple and appealing to the average family member. The home page has little icons to click to search areas of common interest including sports and entertainment There is an area called Definitely Not for Adults (DNA) which has sections for teens and for younger children with a heavy emphasis on learning and research

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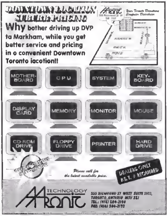
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[illegible] 1 500 Web sites with a large proportion of Canadian content are available direct from the home page. A variety of additional powerful search options (including easy access to the Yahoo and WebCrawler search services) are offered. As well, Sympatico has licensed the Canadian developed OpenText search engine software and intends to have it available shortly.

The Sympatico service appears to be completely bilingual and both French and English versions of the signup software are available. Some media criticized the lack of a Mac version of the Sympatico startup kit. One MediaLinx person joked "Mac folks can use their existing Web browsers — Windows users needed more help," provoking a wave of applause from Mac enthusiasts. A Mac version and a 32-bit Windows 95 version will be available later, they promised.

Give My Credit Card Info Over The Internet?

One possibly dodgy bit in the package is method of payment. The brief and clearly written manual for the Sympatico software states on page three that you will be required to give your credit card number and expiry date during the online registration process. One wonders how many hackers will be lined up in cyberspace at the gateway to Sympatico trolling for free credit card numbers.

Free For All, For Now

One curious media person asked if just anyone could access the Sympatico Web page and in effect use its services for free. Scott Remborg, a technical expert for MediaLinx who are providing the technical expertise behind Sympatico, confessed that yes, anyone with any Internet account and a Web browser could access Sympatico for free — for now, that is. He indicated to *TCP* that this would change at some time in the future when access to Sympatico would be restricted to members.

When asked if there were any facilities to prevent children from departing from the friendly confines of Sympatico's recommended sites in search of objectionable material, Remborg replied that no such facilities were in place. Parents will have to provide guidance and supervision on the use of the Internet.

When asked about the possibly monopolistic aspect of Bell moving into the ISP market, especially in light of its recent attempt to triple ISP phone line rates, Liz Gibson replied "Don't ask me, we're not Bell (Sympatico is a division of Bell Sygma)." She then went on to recommend that subscribers go to the nearest Bell Phone Centre to ask for the sign up kit. When asked if any other ISP's are being allowed to sell Internet service subscriptions through Bell Phone Centres, Gibson replied "None that I know of."

With the entry of Bell in full force into the Internet Service Provider market, the 'Net landscape in Canada has changed forever. What that means, for users and for private Internet Service Providers, will be interesting to observe. ❑

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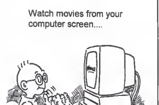

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CONTACT PROFESSIONALS

Digital Gatekeepers Filter Web Content

BY GEOF WHEELWRIGHT

Recent reports about the proliferation of pornography, hate literature and violent words and pictures on the Internet have fuelled a growing demand for tools to help parents control what their children see and hear on the Web.

Providing that they know where to look it is not hard to anyone — even a computer literate child — to gain access to places such as the home page of the adult magazine *Penthouse* with pictures of nude women and pornographic letters. Even more sinister are reports that some children have been contacted online in cyberspace chat mode by pedophiles who establish an online relationship with them by electronic mail and then try and lure them to a meeting outside the home.

Earlier this year, for example, the United States Federal Bureau of Investigation concluded a two year investigation that resulted in a dozen arrests and searches in more than 120 US homes on charges relating to the use of the popular America Online information service by a small group of individuals to distribute child pornography and arrange sex with children.

In the US, software giant Microsoft and leading Internet browser software producer Netscape Communications have joined forces to found the Information Highway Parental Empowerment Group to develop technological solutions to this problem, while the US Senate is considering legislation aimed at the same issue.

Meanwhile in Canada, North Vancouver based Trove Investment Corp. has a product to help parents use technology to supervise the way their children use the Internet. Known as Net Nanny, it is a $49 software package for the Microsoft Windows or DOS environments that promises to monitor the content of a given World Wide Web page before it appears on a computer screen and prevent it from being displayed if the content is deemed to be inappropriate.

If "trigger" words or phrases are typed on the PC keyboard or registered as being received during a chat conversation, a "hit" is registered and Net Nanny will lock up the computer's keyboard and close the system down. Only by using the Net Nanny administration program can it be restarted by parents (or whoever holds the passwords to use the administration software).

The trigger words or phrases used to block a given page from being displayed are entirely up to the discretion of parents. In addition Net Nanny can be set up to prevent the transmission of personal details — such as name, address, phone number or credit card details — so that children cannot inadvertantly give out sensitive personal information over the Internet.

According to Net Nanny manager of business development Graham Heal, the real advantage of his company's system is that it is flexible and under parental control. "Other products have recently popped up on the market which contain an arbitrary list of sexual content Internet addresses, which the developer has deemed undesirable and blocks them. But the list of addresses is encrypted so that you don't know what material is being blocked," he says. "We feel the parent, the school or the employer is the one best suited to determine what their kids or employees should have access to."

Heal says that sexual material is not the only offensive information people may come across on the Internet. Net Nanny also allows users to filter out information on bomb-making, drug making, anarchist chat lines, Neo-Nazi political tracts, online gambling and liquor purchasing. It also prevents transmission of credit card information. ❑

Contact: Trove Investment, 681 4461

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CASH AND CARRY

A Case of Spam

BY JAMES MACFARLANE

Spamming is a technique used by guerrilla Internet advertisers where they'll indiscriminately post blatant advertising in multiple usenet newsgroups, forcing the message in front of millions of users.

This is offensive for several reasons. One, it pollutes the thought space of a given newsgroup. Something completely out of place and off topic is thrown in to disrupt an otherwise decent conversation.

Secondly, it is a waste of resources. As the 'Net gets busier, the infrastructure and cost of maintaining it increases. Spam is beginning to take up more space in some newsgroups than the legitimate discussions.

Thirdly, 'Net citizens are very opposed to in-your-face advertising techniques. If you want to advertise on the 'Net, get your own Web home page.

The fact is, spamming is not an effective way of advertising. You generate more negativity and resentment towards your organization than you'll ever get back in sales. On top of that, many self-righteous 'Net users will try their best to sabotage your operation. I don't blame them.

What You Can Do

First off, what not to do is respond to the message or even talk about it in the newsgroup. More bandwidth is often wasted complaining or talking about the spam than the original message.

What some people choose to do is mail-bomb the user who sent the original message. This is when you do something like forward 500 copies of a 10 megabyte file full of the letter *A* to someone. While this could crash their account by filling up their local hard drive, you could also crash the Internet service provider that they're on, disabling the accounts of hundreds of innocent people in the process. On top of this, your message still chews up bandwidth as it makes its way to the recipient.

The most effective way to address the problem is to send a stern but polite letter to the system administrator of the site where the message originated (usually admin@wherever_it_came_from). Internet service providers are currently the only defense against these types of people. And the only way they can help is by creating anti-spam policies for their sites, and setting strong deterrents for offenders.

Often this only means closing the offender's account. But why are the offenders going to care? Obviously they're not a serious Internet user or they wouldn't be doing these sorts of things in the first place. So what if their $19.95 account is closed down? $19.95 is still cheaper than taking out a classified ad in the local newspaper. So what?

These sacrificial accounts mean nothing to these people. They'll just open another one under another name on one of the other Internet providers in their community and pull the same trick over and over again.

There's nothing that can be done to stop them—or is there? Since there's no criminal law preventing this type of activity, the only practical way to stop it is to have users sign a contract when they join an Internet provider. A clause in this contract would stipulate a fine for spamming, one big enough to deter most people. Breach of the contract would make the fine come into effect.

But should ISPs have to consume their time and resources policing a small number of offenders? Should they be policing anything at all? By preventing spamming they are protecting both themselves and their users from the reprisals of angry 'Net users at large who are the spam victims. Is there no fool-proof system?

To help find an answer to these sorts of questions, I contacted Constantinos Karbaliotis (kartis@techne.com), a Toronto-based lawyer who also runs a FirstClass BBS specializing in Internet-related issues.

He explains, "While the information highway metaphor doesn't always work, here's one place it does. BBSes used to be the information back alleys. Now the Internet is the information highway in the sense that a road with a greater amount of traffic has a greater need for rules."

"The real answer is for ISPs and users to work together to form a consensus on what is acceptable behavior on the 'Net," he says. He firmly believes that the Internet is going to have to develop its own legal system, one not based on the courts, but one based on the global community.

Continued on page 109

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New Direction For Davidson Kid's Titles

BY PEDRO ARRAI

One of the pioneers in children's educational software Davidson and Associates product line runs from titles to prepare toddlers for letters in preschool all the way to a program that helps the young graduate design the perfect resume to help snare that first job

Most parents are familiar with Davidson's Blaster series which includes Math Blaster Alge Blaster and Reading Blaster They also publish a Kid series that include Kid Phonics Kid Keys Kid Works and Kid CAD

Now Davidson has introduced three new programs that are different from anything the company has offered to date The Magic Tales series are interactive readers narrated by a folksy mouse called Grandpa Mouse This wise old storyteller takes children along on an imagination-filled adventure to exotic and exciting locations. These are timeless folk tales from the far corners of the earth. Imo and the King is set in Africa The Little Samurai is based on a Japanese tale passed down from generation to generation and Baba Yaga and the Magic Geese is set in Russia

Each features cinematic quality animation that sets new standards for children's edutainment software Characters react to events that unfold around them with believability and realism (the company claims 400-500 click-and explore interactive elements) The background is rich in objects and supporting characters with an almost 3D effect The audio does not disappoint either with a host of different voices and songs Each program boasts nine to 17 original songs and literally hundreds of humorous sound effects give the program its depth

Children can choose to explore the titles on their own or have Grandpa Mouse read the stories to them Like classic folk tales, each title chronicles the adventures of a character that espouses virtues such as humility bravery kindness and determination

Baba Yaga is the adventure of a young girl who learns a lesson in responsibility and keeping promises The Little Samurai rein

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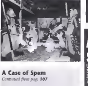

forces Laughter's ability to overcome great adversity. Imo finds his kind deeds rewarded by the recipients when he is faced with seemingly impossible tasks later. The heroes are all children and the villain is easily identifiable. The text of the story is legible and always on the screen, but not intrusive. In fact, early users can follow the story without having to read at all. As well, a paper based copy of the story is also included in each box, giving children a link that they can take anywhere with them.

The games also benefit from the fact that they were designed for Windows 95 from the outset, with better-running graphics and no footprint when the children are finished. It also has Windows 3.1 and Macintosh versions of the game on the same CD-ROM. Windows users are warned that their machine needs to be a 486 or better with 8 MB to run the program adequately. Street price is around $50-$55 per title. ❑

Contact: Davidson 310-793-0600

A Case of Spam

Continued from page 107

"If we don't have our own rules, the courts will be forced to impose them, and they're not necessarily the best people to be making those sorts of decisions."

Karbaliotis says this is a wonderful case of how common law works. The free market will automatically develop its own ways of dealing with problems like spamming. When the courts are asked to enforce something, they'll look to the community and how things work there for a position on the issue. If the community already has a well developed plan for dealing with an issue, the court will usually move in that direction as well.

So this once again enforces how important it is for us, the users and providers of Internet services, to devise our own set of rules for dealing with issues like spamming.

Karbaliotis agrees that sign up contracts between ISPs are a good first step in dealing with spammers, but that there are a lot of broader issues that must be examined.

The Internet, in its truest traditions, must look to the community it serves for answers to the problems that affect us all. ❑

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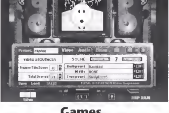


Games, From the Imaginative to the Downright Bizarre

BY GORDON GOBLE

A little imagination is a wonderful thing. In a New Year's celebration of it, *What's Playing* looks at a selection of imaginative, curious and downright bizarre gaming software. First up is the debut product from a small but otherwise accomplished company out of San Francisco, Pop Rocket. It's called Total Distortion, and that pretty much describes the way you'll feel after giving it a whirl.

Next, from After Dark creators Berkeley Systems, comes the hilarious computer game show You Don't Know Jack, followed with Capcom's puzzle game with a twist, Tang Chi.

The journey of weirdness begins with:

Total Distortion
By Pop Rocket, Inc.
Format: Windows 3.1, Windows 95, Macintosh
Street Price: $60

Technically, Pop Rocket's Total Distortion is an adventure game, but nothing follows the rules in this absurd, demented and very loud musical insane asylum.

The primary goal here is to assemble various audio and visual snippets into a cohesive and marketable music video. Total Distortion supplies ample tools (including a very nifty editing suite) to do just that.

Artistically inclined fans of hard-edged rock and roll will undoubtedly find this part of the game to be thoroughly innovative and immensely enjoyable, but it's just a fraction of the manic Total Distortion world.

The TD story picks up in the year 1998, right here on planet Earth, where the mysterious appearance of strange, other-worldly machines has suddenly allowed man to engage in inter-dimensional travel. It is during such explorations that startling similarities between alien civilizations and our own are discovered, particularly in the way we all seem to revere the purveyors of popular culture. Specifically, musical entertainers are held in god-like status throughout all the known dimensional planes (doesn't that figure?)

Our hero is a "dimensionaut," a traveler of time and space, and for reasons that soon become apparent, creating the ultimate music video is his quest. Since all the good material on earth has been already used ad infinitum by the MTV generation, he has journeyed very far, to the Distortion Dimension. Here he has arrived with his personal media tower to capture images and audio that will set his video apart.

In classic adventuring style, there really isn't much in the way of gameplay instructions, and players are pretty much left to their own wiles.

It's a beautifully animated, 3D first person kinda thing, with movement buttons at the base of the screen. Gamers will walk about experimenting at first, operating the cool futuristic devices within the tower, picking things up and using them or storing them in their omnipresent expandable guitar case.

One's character will fatigue with time and maybe get a little hungry or thirsty, and he'll have to deal with those needs, as well as the strange and often hostile world that awaits outside the tower. More importantly, he'll have to learn the finer points of the TD Video Sequencer, which — considering it's stuck right in the middle of an adventure game — is a surprisingly competent frame-by-frame audio-video editing suite.

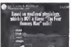
There's a number of fast-fingered hard rock tunes and dozens of short film clips and still photos (ranging from flying guitars to dancers to haunted houses) from which to choose, and many more images can be gathered throughout the game with one's trusty video camera. The finalized product is then shopped around via interstellar telephone to interested buyers back on earth, and — you can trust me on this one — these buyers know a good video from a bad one.

That's the basic plot and structure, but it tells little of the complete TD experience. It's

➤

a pop culture fantasy, from smart relevant humor to way cool audio. Virtually everything has its own sound effect, and when wacko noises aren't popping from the speakers, searing music is.

Once outside the tower, Guitar Warriors will battle you in do-or-die contests of guitar playing ferocity, flying skulls may seal your DOOM, and musically adept humanoids will either assist or hinder. Along the way there are puzzles, mini-games and other lunacy type stuff, often packed with clues. There's a fair chunk of intricacy here and one can "die" quite easily, so be prepared to take notes and save your current game regularly.


Based on medieval physiology, which is NOT a flavor "The Four Humors Man" sells?
blood
black bile
yellow bile
phlegm

TD uses lots of disk access and combines digitized video images with complex animation, so a quad-speed CD drive, fast computer and a ton of free hard drive space (try 40 MB) are desirable equipment. When a game tells you succinctly that "You suck at this" and plays the You Are Dead celebratory song when you *do* die, it's just gotta be good. Total Distortion is, and as a bonus, is compatible with Macintosh and Windows (3.1 and 95) systems.

You Don't Know Jack

By Berkeley Systems

Format: Windows 3.1, Windows 95, Macintosh

Street Price: $40

Question #1: The combination of mint flavoring and crystalline sugar in wintergreen Life Savers can cause what?

1) Convulsions
2) Sparks
3) Methane
4) Cancer

Question #2: If the folks from Mayberry found themselves back in the Middle Ages, which character would be expected to take up bloodletting as an additional part of his business?

1) Andy Taylor
2) Otis Campbell
3) Floyd Lawson
4) Goober Pyle

If you answered Sparks and Floyd, you'd be well on your way to fame and fortune in Berkeley Systems' fast and furious computerized game show You Don't Know Jack. With categories such as Weird Games That'll Anger Birds and Monkeys and Spreadable Lunchmeat, YDKJ is off beat and funny while rewarding common sense, trivial knowledge and a quick mind. But there's a lot more here than a bunch of questions and answers.

YDKJ features all the trappings of a television quiz show, from its professional, polished look to the witty banter delivered by its ultra-cynical host (who sure sounds a lot like *Saturday Night Live's* David Spade). Pick the wrong answer or buzz in too early and you'll pay a penalty, either in the form of lost points or derisive ribbing. Perceptive programming and lots of random, non-repetitive verbiage certainly had me believing I was dealing with real people and not a pre-written program.

YDKJ is quite enjoyable when played solo, but it really excels in human vs human mode. The game lets up to three people duke it out at any one time, each being assigned a given keyboard key as their personal "buzzer." The winner of the last question picks the next category, then it's simply a matter of who gets through the question, picks an answer and hits their buzzer first. Virtually everything of importance is both spoken aloud and displayed on the screen, meaning speed readers will certainly have an edge.

While most of its 800 questions are multiple choice, Gibberish Questions (phonetically jumbled familiar sayings) and Jack Attacks (two phrases or words that must be matched from a wild selection that floats across the screen) further heighten the already edge-of-the-seat experience. Additionally, a little feature called Screw Your Neighbor gives players the chance to force competitors into answering questions that look particularly difficult.

I played You Don't Know Jack with at least a couple of people who maintain their dislike for computer games, yet that opinion changed radically as we fought side-by-side for the high score.

Extremely fast paced, full of interesting facts and riotously presented, You Don't Know Jack is great fun for the trivially inclined who are also into intelligent verbal abuse. According to my sources, add-on packs of new questions will be available in the future.

Tang Chi

By Capcom

Format: Windows 3.1, Windows 95

Street Price: $40

The Tang Chi game manual relates the ancient Chinese fable of Wong Fu, a simple yet generous and hard working farmer. One day Wong Fu was attempting to repair his leaking farmhouse roof before a terrible storm arrived. As he ascended the ladder, one of the roofing tiles slipped from his hands and shattered into seven pieces. Try as he might, Wong Fu could not reassemble the pieces into the square tile it once was.

However, Wong Fu soon discovered that these seven pieces could be manipulated to form other images. Soon he was shaping rabbits, birds and even a human. Wong Fu was shocked to see that when each image was completed, it would spring to life and help him repair his roof. Wong Fu had been rewarded for his good nature.

This is the pre-amble for Capcom's puzzle game Tang Chi. And an interesting one it is. Tang Chi lets us modern day computer users digitally reassemble these same seven pieces into any one of 50 forms, then watch as these images "spring" to life. Certainly, it's darn nifty how these same seven pieces can take on such a variety of shapes, but in the long run, gameplay gets a bit repetitive and the short morphing movie that finishes each level is none too spectacular.

Tang Chi is pretty much on par with Windows' own Minesweeper: a nice break in the day but little more for all but true fans of this particular puzzle genre. ❑

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BY JEAN ALLEN-IKESON

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Many of us feel intimidated when confronted with the inevitability of starting over with a new computer or upgrading the old one It's a bit like dealing with mechanics or autobody companies if you live where salt is the most common material between you and the asphalt. They smile and say "Oh we have actually had customers who had gone a full year without seeing new rust" With computers just read 'A full year without being embarrassingly obsolete."

Take heart, there is some help at your nearest bookstore The world according to Myles White aka *How to Buy a Computer or Upgrade What You Have* is far from the clinical don't bother reading this-unless-you-are-a techie approach that some hardware reviews take.

Here is a readable and entertaining dissection of the hardware components most of us feel we must at least pretend to understand before buying or upgrading a computer Whether you are new to computers or already knowledgeable you will find the book useful Be prepared to laugh

Don't be surprised to find the author galloping out of the sunset with CPU facts printers and modems smoking. He is no newbie awed by the wonder of technology Myles White has been testing components and writing about them in several Canadian publications for years This has given him the experience to review the facts and let you in on the truth about the myths

How to Buy a Computer combines a bit of history (in computers, the last five or ten years) what is available now and what the future may hold There may be more detail at times than you really wanted to know, but it is always readable and understandable However at some point you probably will find that you want to know more and here is a quick and easy reference under one cover

Besides examining the innards of computers with their accompanying "hardware standards," printers, scanners, power protection, multimedia add-ons and modems are also discussed. Unlike a magazine review of for example, specific brands of printers Myles White covers types of printers, reasons for buying a certain kind and their pros and cons It's a good place to begin if you are in the market for a computer and are overwhelmed by variety and price. There is also a useful discussion of upgrading versus replacing your computer and how to avoid some retailers' tricks and traps

There are two other good reasons to buy this book. The first is that McClelland and Stewart (the publishers) will refund the price of the book if you also buy *The Canadian Encyclopedia Plus on CD-ROM* The second reason is for those occasions when your neighbor phones up and pleads for some advice on buying their high schooler a computer. You after all own a few computers and must be an expert No longer is having the biggest house or hottest car the ticket to being number one on your street It's the nineties Number one means owning a couple of computers and at least appearing to know something about them Just lend your wannabe neighbor *How to Buy a Computer* and sit back and enjoy the fame ❑

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Business and Marketing on the Internet

BY FRANK GARCIA

With the increasing popularity of the World Wide Web on the Internet a lot of activity is being generated by those in the business of marketing products and services. For anyone who is interested in jumping into the pool, Jill Ellsworth is a good person to talk with.

Jill H. Ellsworth Ph.D is a university professor who is also an Internet consultant for Fortune 500 companies. She is a frequent speaker about business and marketing on the Internet.

"I used to be a professor of statistics and research methodology and then I wrote a book on Internet businesses for John Wiley," says Ellsworth who is based in Texas. "I became more interested in working with businesses online and started my own company consulting about marketing on the Internet."

Dr. Ellsworth is co-author with her husband Matthew V Ellsworth of *The Internet Business Book* (John Wiley & Sons Inc. 1994), *Marketing on the Internet: Multimedia Strategies for the World Wide Web* (John Wiley & Sons Inc.) and *Using CompuServe*. She has also explored education on the Internet and contributed chapters on business and education in the massive tome *The Internet Unleashed*.

If you haven't looked into bookstores lately you will find an explosion in the field of computing books. Ellsworth recalls that "When the Internet business book first came out I would go to a bookstore and ask where the Internet books were," says Ellsworth. "They would look at me like I was nuts! Now we have whole sections. Tons of books. When my book came out there was Ed Krol's book [*Whole Internet Book and Catalog* by O'Reilly and Associates] a couple of navigating books out but there weren't many. Now we have whole sections. The 'Net has changed a lot."

At 50,000 copies for one of her books Ellsworth is a bona fide best-selling author. "In computer Internet books that's a lot," she says. "Luckily having a reputation in that domain makes it easy for me."

Ellsworth also says that the book on education on the Internet is particularly successful because there are not very many books on that subject and she exclaims, "K-12 is growing like crazy."

The computing book growth parallels what's happening in the growth of the Internet itself as well as in the online business and marketing activity. Everything is on the upswing.

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a marketer has to be noticed. The World Wide Web population is growing faster every month. It helps to be linked to search engines and category 'suites' (ie., Auto Malls). For example, try Branch Information Services (http://branch.com:1080), MarketPlace.Com (http://marketplace.com) and The Interactive Super Mall (http://supermall.com).

But beyond being placed so that a visitor can find you, the construction of an advertising Web page must be done with care, taste and style.

"Virtual Vineyards (http://www.virtualvin.com/) is a very successful site," says Ellsworth. "It's an attractive site, well designed, makes it easy to pay for and shop."

According to a recent cover story by *Information Week* on "Making Money on the Web," Virtual Vineyards generates revenues in the tens of thousands and the company expects monthly sales to be US$100,000 by the end of this year.

However, a graphically pretty design alone will not guarantee a Web site's success. Ellsworth says content and graphics combine to play an important role in the success of a web site.

"There's Hot! Hot! Hot! (http://www.hot.presence.com/hot) that sells salsa and hot peppers products," grins Ellsworth. "They are popular because they've gotten a lot of play with HotWired and other popular sites. They've gotten a lot of exposure just like you would in a big ad campaign."

Marketing salsa is truly scalding with $60,000 worth of sales over the Web in the last year. That's one-quarter of total annual sales.

"The Ragu site is great. (http://www.ragu.com — Mama's Cucina) For Ragu spaghetti sauce. There's recipes! It's a marketing site. Good job!"

On the flipside, signs of an unsuccessful or poor site are easily identified, says Ellsworth. "Without picking on any particular sites, I'll give you a couple of characteristics. It would be a site that's possibly reasonably designed, but they didn't bother to register it with any of the search engines. So, no one can find them. You're hidden. I call that the invisible Web."

Continued on page 116

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Apple, IBM Shut Down Kaleida

BY GRANT BUCKLER

MOUNTAIN VIEW, CA (NB) — Kaleida Labs Inc, the multimedia joint venture that IBM and Apple Computer Inc set up with much fanfare four years ago, is being folded into Apple. The move has sparked speculation that Taligent Inc, another joint effort working on object-oriented technology, might meet the same fate.

> Kaleida and Taligent were born of an alliance between traditional rivals IBM and Apple. Kaleida inherited multimedia technology from both companies.

IBM and Apple made the quietest possible announcement that Kaleida would close. They released a statement to a limited list of media outlets, ignoring widely distributed press release wires, on the last day of the huge Comdex/Fall trade show, when much of the computer industry and the trade press were en route home from the Las Vegas convention.

Kaleida's core technologies, including the ScriptX multimedia programming language, are to be transferred to a development team at Apple's headquarters in Cupertino, California. Some of the joint venture's 79 employees will be offered jobs at Apple or IBM, officials said.

Rick Bause, a spokesman for IBM, told Newsbytes that IBM will continue to work with Apple on multimedia technology. Both companies will have full licensing rights to the work Kaleida did.

Apple, through its multimedia and developer support structure, is to continue supporting ScriptX customers.

Bause refused to comment on reports that Taligent, which has developed an object-oriented development environment called CommonPoint for IBM's OS/2 operating system, the upcoming release of Apple's Macintosh OS known by the code name Copland, and two versions [illegible] be shut down. "They've been very successful in delivering the CommonPoint object-oriented technology," Bause said.

Reports have suggested that, with Kaleida absorbed into Apple, Taligent is likely to be folded into IBM.

Kaleida and Taligent were born of an alliance between traditional rivals IBM and Apple in October 1991. Taligent's efforts are based largely on earlier work by Apple on operating software code-named Pink, while Kaleida inherited multimedia technology from both companies. The same alliance, with chipmaker Motorola Corp thrown in, brought forth the PowerPC reduced instruction set computing (RISC) processor architecture now being used in new Apple Macintosh computers and IBM RISC System/6000 workstations and servers as well as some other systems. ❑

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Apple Chinese Dictation Software Now Available in US

BY PATBICK MCKENNA

NB — After introductions in Beijing, Singapore, Hong Kong and Taipei Apple Computer Inc 's Apple Chinese Dictation Kit recently its US debut Apple claims the kit allows Mandarin words and phrases to be converted into simple or traditional text five times faster than popular keyboard input methods

"Today's introduction heralds the start of a revolution for Chinese computing on the Macintosh platform," claimed Michael Spindler Apple s president and chief executive officer Looking to build on the number of Macintosh users in China Spindler also said the dictation kit underlines Apple s intention to make Macintosh "the platform of choice "

The Apple Chinese Dictation Kit compliments a standard US keyboard and mouse through dictation software and an Apple Dictation Microphone Apple says this new speech recognition technology combined with a US$299 price tag will open Macintosh computing to a wide audience of users who have had to work with complicated Chinese keyboard input methods or slower, less efficient Chinese speech recognition systems

The Kit should also open the door for more first-time computer users. It operates on any Power Macintosh computer using System 7 5 with four megabytes (MB) of free RAM, 27MB of hard disk space, and 16-bit sound capability Most of the hard disk space is recovered after an initial training/user recognition phase

To operate the dictahon system, a user "teaches" the computer to recognize his or her voice and phrasing in a training process which takes about three hours The system creates voice models and files them under a user profile. Users may copy their profile to a 3.5-inch disk and install it on any Power Mac with the dictation system Each dictation system can support multiple users

A vocabulary of more than 3,500 single characters and over 12 000 multi-character words are used for recognition Combined, the single characters and multi-characters allow the system to recognize 350 000 phrases. Apple says this is more recognition than any system in any language

Other features of the Apple Chinese Dictation Kit include the capability to add custom phrases, the use of voice macros to represent long phrases, addresses and other information, and easy to-use error correction

Apple says the kit will be available in the first quarter of 1996 ❑

Internet Business & Marketing

Continued from page **114**

Ellsworth also makes reference to the "dead Web," which no one has visited for a long time, and which hasn't been regularly updated.

"There's nothing going on!" she says "or you e-mail to get information and no one answers you You re not going to come back."

She also warns of the dangers of using "enormous" graphics which take too long to load.

"The other kind of pages that don t work with business are the ones maintained by two guys out back who are a kind of renegade little group, who don t integrate with the company They don t have the same image messages.. so when they get tired It goes away They don't want to work in tandem with the institution."

Ellsworth notes that "In real estate, success is location location location On the Internet, it's content content, content. With interactive repeats People get on the 'Net for two things Information and networking with folks! That s the thing! That's what they like to do! That's why they get on and the page that gets them involved in those things is going to be successful "

For more information about Ellsworth or her books try her Web page at http //www oak ridge com/orr.html. ❑

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The World According To Bill

BY JEFF EVANS

Title The Road Ahead
By Bill Gates, with Nathan Myhrvold and Peter Rinearson
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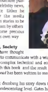
I remember seeing Bill Gates in Toronto a few years ago, shortly after some unauthorized biographies about him were published to considerable media attention. At a Toronto press conference, Gates handled himself calmly and smoothly before the assembled crowd of journalists until the subject of the rogue biographies was raised by an unwary reporter. Gates flushed, his voice rose, and for the first time in my experience of him I saw Bill Gates get really mad. He departed from business topics and got personal denouncing the rumors and lies that sloppy and inaccurate writers published about him. He made some general comments about how the press gets things wrong, and as he glared animatedly at us he seemed to regard all of us press types as somehow related to those who had misrepresented him.

At some point, Bill Gates decided to tell his own story in his own words. The result is Gates' first book, *The Road Ahead*. I found it more entertaining and readable than most technology writing, and it effectively includes elements of autobiography, science lecture, propaganda and even a touch of *Lifestyles of The Rich and Famous*. *The Road Ahead* is Gates' response to the myths and speculations about him by the media, as well as a description of his vision of our wired future. It's an opportunity for him to speak directly to a world audience, without being filtered.

The Reluctant Guru

In the last few years Bill Gates has become a world figure almost against his will — richest man in the world, king of the nerds, cultural hero, alleged monopolist. He's no longer just a software marketer, he's a celebrity. And given the insatiable public appetite for celebrity news, he has a choice. Either he refuses to play the media game, and allows stories to be made up about him by others, or he spends some precious time telling it his own way.



Man, Industry, Society

Gates seems to have thought hard about how to communicate with a wide audience about complex technical and economic issues with this book, and the result is that *The Road Ahead* has been written to meet several goals.

First, without dumbing his story down to an offensively condescending level, Gates has tried to write for people who are not technophiles, using plain language, and explaining computer terminology and giving simple understandable examples. In this he's surprisingly successful.

Second, Gates realizes that the reader is interested in him as a public personality, and he includes enough about his own upbringing and beliefs to satisfy the reader's curiosity about him as a man, and to explain how his views on technology and the information highway have developed. He adds personal anecdotes at regular intervals, which humanizes the story and the storyteller.

Third, Gates shies away from any political, religious or ideological prescriptions for solving society's ills via technology. He claims to have no solutions for the eternal questions but rather is only trying to provoke timely public discussion that may lead to a more informed usage of the new technology for the common good. This lends the book a kind of bland, friendly inoffensiveness which will deflect many critics but makes it less provocative of thought and debate. He's too nice.

Parables And Possibilities

In *The Road Ahead*, Gates lays out his vision of the next wave of technology, the real Info Highway. He looks back at the PC revolution in which he was so influential, and tries to predict what changes for good and ill (but mostly for good) a wired world economy and culture may offer to us.

Agents, E Books and Wallet PCs

Gates believes that the ways in which people work, learn and communicate will change fundamentally because of intelligent, powerful and networked info systems. This is not exactly news, but he lays out his vision for how this is going to happen, and how it is going to work, in a detailed and understandable way.

He predicts that this technology is going to be an intimate part of our daily lives. Intelligent software agents will talk to us and actively help us manage the torrents of information pouring through our lives. We'll have much greater choice of and interaction with all kinds of media. We'll carry digital aids like wallet PCs that will keep us in touch with the world network for almost any imaginable purpose, from paying a bill to writing a love letter.

The Technological Optimist

Gates argues that the net effects of new technologies, on balance, can be hugely beneficial to humanity. He claims that for every downside (loss of traditional jobs, threats to privacy, undermining of traditional cultures) there are huge benefits (new and better jobs, access to information, ability to communicate with anyone in the world) that more than outweigh the costs. He argues, though, that users — ordinary citizens — will have to make the right choices in the marketplace and in politics if the full benefits of the Info Highway are to be realized.

Laissez Faire

Gates seems sincere in regarding the market as the best determinant of how the Info Highway should evolve. He longs for the triumph of Adam Smith, where economic self interest is allowed to determine the shape of the society of the future. He urges governments to get out of the way of progress by abolishing the regulations and state sanctioned monopolies which will otherwise restrict the development of the best of all possible worlds.

Breaking The Mold?

Gates is remarkably direct in discussing his own corporate mortality. He has studied other technology companies that once looked wise and invincible, and then suddenly collapsed as they were overtaken by change. He admits that Microsoft is vulnerable to the same pattern, but claims that he will try to stay in touch with reality and listen to users and the market, and bring Microsoft through the transition to the age of the Info Highway. Only time will tell if he can really do this, but he makes a good case.

The House

And, of course, Gates bends to the public's desire to know about his famous hi-tech house, currently a building among the trees and streams of Washington State. Gates is willing to live with the technology he's touting, even if he has to invent it and be a guinea pig in debugging it. He's honest enough to

➤

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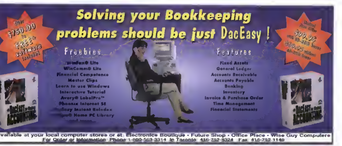

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admit that some of his favored gadgets (like an electronic pin that allows the house's computers to track occupants throughout the building and help them turn on lights, music or climate controls), may not be the wave of the future. Here, his wife appears in the story to represent a kind of reality principle moderating Gates' technophilia.

No Comment
You'll look in vain through *The Road Ahead* for any discussions of social problems, or religion or racism, or many other difficult aspects of life. Aside from passing references to the disenfranchised in an inner city and general criticism of the mediocre public school system, it would be hard to tell from this book that Bill Gates has spent much time actually walking around the streets of America's cities or talking to any wide cross-section of its citizens.

You Can Tell It's By Microsoft - It's Big
The Road Ahead is being published on the scale normally associated with a Microsoft product release. It is being launched internationally in more than 20 languages in more than 30 countries. Over 1.5 million copies of the first print run have been manufactured. The book comes with an excellent interactive CD ROM disk containing an electronic version of the text, plus a 3D walk-through of the Gates' new house, a digital video interview with Gates, and a World Wide Web browser. However, unlike a typical Microsoft money-spinner, all the proceeds from the book are going to fund educational efforts to encourage the use of technology in education.

The Road Ahead is an enjoyable read. I felt that Gates was honestly trying to communicate his hopes and dreams about the potential of technology to serve mankind in a positive way. I'd recommend it to anyone who wants to understand what the phrase Information Highway may actually mean in your own future. ❑

A Country by Consent Disappoints

BY MONICA STARK

Title: A Country by Consent: Multimedia History of Canada
By: West/Dunn Production
Platforms: Macintosh or Windows
Price: $99.95

I love history. On close inspection, Canadian history ranks with the most exciting. We have it all: adventurers and explorers, gory battles, nasty take overs and romance. I'm among those who would see our history glorified the way other (nearby) countries history's have been. When A Country by Consent showed up on CD ROM I was excited. Here — finally — Canadian history in all its glory bundled into an attractive package that would be accessible to all Canadians, thanks to the wonder of modern computing.

I was disappointed.

The first surprise comes when you go to install A Country by Consent on your computer. Open the box and find not only a CD-ROM, but also two double density disks. The CD-ROM is filled with hypertext markup language tagged (HTML) files and the media that will complement it. The disks install a Web browser and a movie player.

That's right kids. A Country by Consent doesn't have its own interface, but rather borrows on an established World Wide Web browser interface. The result is predictable. Web browsers are wonderful for browsing the Web. Especially since, in that role, a browser ties you to thousands of computers and resources around the world. On the closed system of your own computer, you're left helplessly floundering with not a search tool or directory function in sight.

Also, the supplied browser is not the most up to date. The pages are boxy and unattractive, the interface somewhat archaic. Sadly, there is no really good way to navigate through the material provided: no search engine or even a proper table of contents is included.

There is a time line and a fairly poor index, but neither of these are particularly helpful if you want to look for specific historical references. I did a "search" on Emily Carr. That is, I scrolled down the index to the C's and then clicked on the highlighted link to *Emily Carr*. An archive photo of Emily Carr at home in her garden with her dogs prefaces four sentences. One of these sentences tells us that "At home in Victoria, Carr kept quite a menagerie of beloved pets." We are not told when she was born, or when she died — let alone how. And there is no hint of the important body of work that would inspire numerous books, films, museums, art schools and whole collections.

The Carr entry is, sadly, typical of the content of A Country by Consent. Most entries are, at best, sketchy and incomplete. There is nothing here that would seem to be helpful to, say, a young student doing a report for social studies or even a hopeful Canadian looking for insight into this complicated country.

The movies are worse. None of them play well on the movie viewing software provided. Most of them can only barely be described as movies at all: they are slide shows narrated by the copy already included in the text.

A Country by Consent has been prepared for use in schools. If we were not told this by the user's guide, we'd be able to tell anyway: the tone taken obviously speaks down to an unsophisticated audience in a way that today's plugged in pre-teens will likely find offensive.

What concerns me most is that schools across the country will purchase this disc simply because it says "Canada" and "history" on the attractively designed box. Caveat emptor: just because a company is capable of figuring out the technology required to press a CD-ROM doesn't mean they can produce a product worth purchasing. Canadians are capable of producing state-of-the-art multimedia materials. However, A Country by Consent does not rank among these.

The Canadian Encyclopedia Plus on CD-ROM (reviewed in *TCP*, Dec. 95) would be a much better — and safer — buy for those looking for Canadian historical facts even if it were six times the price, which it is not. ❑

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Educational Beethoven CD Is Also Fun

Title: Beethoven Lives Upstairs
From BMG Interactive
List Price: $43.99

BY JEAN ALLEN-IKESON

Beethoven. Kids. Classical music. Educational. Fun. These alone ought to be enough for parents to stop and check out Beethoven Lives Upstairs in software stores.

Classic Kids, a company founded by Toronto's Susan Hammond, has developed a cult of devoted followers with music CDs, cassettes, a video and a book. Using the same name and theme as the new CD, the video won an Emmy. The music CD and cassette won a Juno Award and two Parents' Choice Awards.

Susan Hammond worked in association with Music Pen Inc. (the maker of Magic School Bus) to create this computer CD for BMG Interactive Entertainment. Certainly first class credentials.

For the most part, the program is a clever mix of clips from the video interspersed with music games and activities. The screens also have "hot spots" that delight children with their surprises. The games teach lessons about instruments and tone, rhythm, pitch, expression and composition.

Learning the mechanics of reading music can easily rank with spelling lists and punctuation exercises for sheer excitement. But Beethoven Lives Upstairs makes it so much fun that children barely recognize that they are learning.

For example, a game called the Great Fen Chase uses the various musical "rest" notations to foil the "bullies" or delay Christoph for the appropriate rest period. Christoph is the main character, apart from Beethoven, who rents a room in Christoph's house.

Christoph introduces you to places in the village where games are waiting. Beethoven also invites you into his room where he is rehearsing with three musical friends. A music stand offers a choice of Beethoven's music. After listening to it, you must decide which of two instruments each musician is playing. Play it again and the instruments and corresponding sounds of each piece change.

This is my favorite activity. Even from an adult's perspective, I found it enjoyable. The sound quality is a pleasure. It's also interesting and entertaining to see how replacing a violin with a xylophone changes the "feel" of the music.

On the other side, a palette that lets children paint the scenes on the screen is an unnecessary add-on. From preschool, kids are asked to draw a picture and attach it to most of the written activities they engage in. It's far too much of a good thing and can turn art into a chore. The CD is a good one without the palette. The musical activities are creative and original on their own.

A trip to the bell tower displays a set of church bells. You may record your own melodies or listen to any of ten preset melodies played with church bells. In a fun twist, the melody that is selected when you exit the tower is played on the hour, as marked by the clock in the town square.

The Name That Musical Square Game Show teaches how to recognize staccato, legato, allegro, adagio, forte and piano. This one uses CD audio and may occasionally be quirky. Sometimes the program tells you the CD audio driver is not loaded when a check of drivers says that it is. Starting over usually solves the problem.

Notes Afloat has you catch notes that "drip" from a water leak in the ceiling. The idea is to catch the appropriate combination before they hit the floor and split into smaller notes, which flood Christoph's room. Notes are dropped into a bucket and should fill a musical measure with the appropriate mix of notes. If you are asked, for example, for a 4/4 measure, it may be filled with one whole note, two half notes, or whatever combination adds up to the required measure.

As with all the games, clicking on a help icon explains the concept being taught and how to best play the game.

In Instrument Fling, Beethoven is in a foul mood and tosses groups of musical instruments (woodwinds, brass, etc.) out of his window. To score points, you must arrange the instruments in groups of four different ones as they fall. This teaches recognition of instrument groups by association.

A friendly character called the Old Candle gives piano lessons and teaches reading music. There are two levels of play: beginner or advanced. You are presented with a keyboard and a page of music. Original music may be played by clicking on the keyboard. Clicking on play activates a page of music from Beethoven's works. The Old Candle explains what to do. The notes are colored to match piano keys, which are also marked with the notes C, D, E, etc., on the first try. Then the process is repeated without color and again without the notes being marked as C, D, E, etc. The Old Candle melts if you make too many mistakes. It's a painless way learn how to read music and transfer it to the piano.

The entire program is tied together with Christoph's Journal, which tells the story using writing from the book and video clips from Beethoven Lives Upstairs.

The best part of this CD is the music itself. I am so used to the tinny music that comes with most children's games and edutainment programs that it is like an oasis to explore Christoph's environment. It makes the sounds appear more vibrant because of this expectation. Small wonder. The music was originally produced for this application. It includes excerpts from 35 of Beethoven's most-popular works: Symphonies Nos. 5 to 90, the Moonlight and Pathetique Sonatas, Violin "Spring Sonata," Flute Serenade G+ Sonatina, Minuet in G+, and Für Elise.

There is no age rating on the package. Sections of the CD will appeal to even young children of five or six. Children that are eight and up and taking music lessons should find it most appealing. A nine-year-old boy who is quite adept with his cello told me he had developed a new appreciation of Beethoven. He thought the games were still appropriate at his level of musical skill.

Parents may enjoy parts of this CD themselves, as I did, because the music is so outstanding.

Minimum requirements: IBM compatible 486SX33, 4 MB RAM, 4 MB free hard drive space, 256-colour VGA, mouse, CD-ROM drive, sound card and Windows 3.1 or later. A Macintosh version should be available in February, 1996. ❑

Beethoven Lives Upstairs BMG (Toronto): no direct order number: available from Meyer's, The Children's Bookstore and software stores.

BBC's Romeo and Juliet

BY ROSS MACDONALD

Product: Romeo and Juliet: BBC Shakespeare on CD ROM
From: Harper Collins Publishers
Street Price: under $55

As a strapping young intellectual of yore I wandered the groves of academe steeped in the trappings of graduate work in venerable English Lit. In those not so bygone days, to own a concordance of William Shakespeare (that's a big horrible book that cross-references every single word of The Bard's complete portfolio) was not only economically unfeasible, but the grand ambition of many a serious student. However, despite how aged you might think I be, CD-ROM came along to ease that burden not so much later... though too late for me.

Only last year I had a chance to look at something from World Library Inc. called The Shakespeare Study Guide, a CD-ROM of the complete works with Barron's Book Notes thrown in for some reason I could never quite fathom — to ease the pain, I suppose, of forced Shakespearean study. The only problem with that disk — notwithstanding the Barron's question — was that it was exclusively text-driven. A great substitute for the book-o-phobe, but not true to the multimedia nature of CD ROM.

Now, at last, Harper Collins Publishers can sniff a buck to be made from the Stratford set and has collaborated with the BBC's education branch to produce this very fine rendition of Romeo and Juliet. I don't know what was behind the choice of plays, but R & J makes for an excellent selection because — forgive me Bill — the elements so mixed in it that people might stand up and say to all the world "This was a play!"

Action, intrigue, romance and adventure are all tied up in this familiar story, but without any of the dark elements that have alienated many folk from the equally well-versed Hamlet or Macbeth. (Macbeth and A Midsummer Night's Dream, incidentally, are the other two titles currently available in this same series.)

Though not a video of the play, this disk contains a complete audio performance taken from the BBC which is accompanied by automatically advancing text, relevant images and some user-activated video of specific scenes. This means that you can sit and read along while listening to the performance, see images of scenes or costumes and watch a few minutes of video showing what you've just heard (when available) all at the same time.

But this disk goes far beyond that somewhat simple pleasure. There's loads of reference material and interesting anecdotes about the life and world of Shakespeare, about the background and language of the play and even an overview of the costume and set design. There are 99 still images in all plus 14 audio clips outside of the play's text.

Though there are only a handful of videos taken directly from the play, others in the video library of 17 clips include Germaine Greer making critical commentary on the text and even actor Sam Wannamaker (you'll recognize him when you see him) discussing his personal project to re-build the globe theatre on its original site. There's a total of 50 minutes of video here so you know that each of the 17 clips runs longer than the few seconds so many CD-ROMs like to give us.

I am oft, of an evening, to play cassettes of Shakespeare's work while reading along from my friendly old textbooks. But this, alas, seems not to be a popular pastime. I wonder though, if CD ROMs such as this might not encourage more people to embrace The Bard despite — and beyond —the nightmare of high school indoctrination. ❑

The Escape of Marvin The Ape

BY ROSS MACDONALD

Product The Escape of Marvin The Ape CD ROM
From VroomBooks division of T/Maker
and Penguin Electronic
MSRP $19.95

Despite The Beatles and Topo Gigio my memories of childhood Sunday nights with Ed Sullivan are piqued by bits from Jackie Vernon and Jonathan Winters. Now I don t know whatever happened to Jackie Vernon, but I was delighted to see Jonathan Winters name on this CD ROM

Based on the very popular kiddy book of the same name The Escape of Marvin the Ape tells the fragmented story of all the things Marvin (that s the ape) gets up to after slipping out of the zoo to wander around New York City Winters is of course the story s narrator but also provides a panoply of characterizations for characters brought to life by hot spots in each of the books 14 screens — or pages

Each page shows a picture of Marvin as he eats in a restaurant, for example or goes to the movies or even plays chess on the street Simply moving on to a new page initiates Jonathan Winters very brief narration "Marvin was hungry so he decided to get something to eat. which is shown in text which highlights each word as it s spoken As fascinating as the story might sound, the real fun starts as soon as you click the hot spots to get something going in each picture. There are a dozen or more such spots to click on each different page

Unlike most CD ROMs these days. The Escape of Marvin the Ape is somewhat static in that most of the animated action can only best be described as brief However the fact that there are so many animations to find and click somehow keeps up your interest—at least the first time through.

Every page of this digital story book also features three little bookworms — Albert Wendy and Pablo — who all at the side of the picture page and act as animated "guides" whenever they're clicked Albert is some sort of madcap inventor whose creations lead to extra information about things in the story Wendy on the other hand will provide explanations about any related topics (the diet of apes for example) or about what s going on in the story Finally there s Pablo, a beatnik bookworm who loves to create so he presents loads of "what if" scenarios as imaginary supplements to the story s action

Wending my way through the story I thought I had a pretty good idea of how it was going to end Of course (I predicted) adherence to current moral standards and formative brainwashing would put Marvin would back in the zoo —happy to have had his adventures but happier to be home

But surprise surprise Marvin doesn t go back. He ends up quite content with his new life and we leave him contentedly playing a chess match on a New York street Subversive kiddy lit. verrry appealing

But children will and do eventually get bored with a story told over and over again (notwithstanding watching The Lion King three or four hundred times) so there s other stuff here to play with too

The weirdest from my perspective is what s called the Musical Fruit Machine some kind of variation on Pong in which fruit bounces back and forth across the screen making little musical pings (or pongs) whenever they hit the edge The interactive part is that you can choose fast or slow and add as many of each fruit (apples pineapples bananas etc) as you like However though they might all make a different "boink" at different times music it ain t Probably perfect for the three-and up crowd this disk is aimed At

Next they have a game called Peek A Boo Apartments" which will prove excellent training for any toddlers who want to grow up to be peeping Toms It s a simplified version of the old "Concentration" game in which the blinds in an apartment block s windows go up when clicked to show a picture You have to find its match behind another blind

You ll also find the Masterpiece Paint Box, quite simply a computerized colouring book with fourteen outlined images from the story to colour as you please The finished masterpieces are printable too—if you don t mind seeing your $40 color ink cartridge used up in a single afternoon

Finally and of interest only to some is that this CD ROM lets you choose to have the whole shibang presented in English French Spanish or German. Selecting any of the four alternate languages from the main menu converts all the text and audio throughout the disk I can t say there s enough here to actually teach a new language but choosing an alternate undoubtedly provides good practice for those already on that track

Though a bit short on the Jonathan Winters component for my taste The Escape of Marvin the Ape contains more than plenty for 20 bucks A definite buy for the rugrats-and up crowd

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COMDEX/PacRim, January 16-18 1996 Vancouver BC For more information contact Adam Tirma at Softbank Comdex (617) 433-1807

ATLANTIC INTERNET OPEN HOUSE & COMPUTER SHOW January 19-20, 1996 Halifax NS For more information contact Ronald James at The Internet Coffee Club (902) 423 3161

COMPUTER FEST January 26-28 1996 Ottawa ON For more information contact John Lapenses at Abba Computer (905) 477 1931

FEBRUARY

COMPUTER FEST February 15-18 1996 Toronto ON For more information contact Ryhan Ahmad at ShowFest Productions (416) 865-4533

QUEBEC CITY BUSINESS/COMPUTER SHOW February 28-March 1 1996 Quebec City QC For more information contact Sylvie Deveneur at ITCS 1 800 361 6308

MARCH

EXECUTIVE SHOW AST ON OPEN CLIENT/SERVER COMPUTING March 4-8 1996 Toronto ON For more information contact Sean Wainwright Plesman Expositions at (416) 487 9562 ext 371

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MICRO EXPO MONTREAL March 21-24 1996 For more information contact Claude Thibault of Abba Computer (514) 844 0500

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TRAVEL TECHNOLOGY 96 March 26-27 1996 Toronto ON For more information contact Ann Crockford at Baxter Travel Group (416) 968-7252

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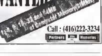

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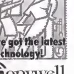
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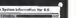
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Pentium 75

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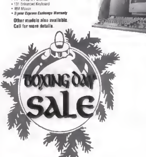

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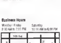

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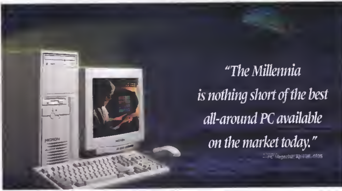
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